Acute Pain for Postoperative Patients in Kuwait:
A Study of How Surgical Nurses Assess Postoperative Pain

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Abstract

Background

Proper management of pain is necessary to help patients recover quickly during postoperative care. Failure to promptly assess and manage pain could lead to complications in postoperative situations and can also increase the length of required hospital stays, create or add to elements of chronic post-surgical pain and overall poor health outcomes for the patients. Nurses play crucial roles in assessing postoperative pain, however despite advances in nursing care, there is evidence from a range of research which suggests that patients still suffer considerable levels of postoperative pain. In Kuwait's healthcare setting, there is a paucity of literature on how nurses perform pain assessment and whether this leads to significant pain relief amongst patients. This research addressed this apparent vacuum in current research literature by exploring the experiences of nurses and patients in Kuwait in postoperative scenarios – focusing in particular on postoperative pain. This work also utilised the findings to help to provide a suggested framework through which the quality of care received by patients in surgical wards in Kuwait could be improved.

Aims and Objectives

This study aimed to explore how Kuwaiti nurses assess pain in postoperative patients in hospital settings in Kuwait and also to examine postoperative patients' self-reported experiences of pain. Specifically, this study aimed to address the following objectives:

- To explore the roles and responsibilities of surgical nurses in postoperative pain assessment;
- To determine the knowledge and perceptions of nurses working in Kuwait on pain assessment;
- To investigate the postoperative pain experiences of patients in surgical wards; and identify potential factors that could affect how patients respond to postoperative pain.

This was intended to help to provide a framework for dealing with the main aim of this thesis which was to look at how nurses assess postoperative pain in Kuwait, and whether the current methods for doing so represented best practice when compared to other regions or institutions.

Methodology

This study utilises a qualitative methodology based on a Grounded Theory (GT) approach to social research. This encourages theory building throughout the work and is used to explore concepts relating to pain and how this is influenced by a range of socio-economic and cultural factors. In addressing these issues the experiences of nurses and patients in a hospital ward in a Kuwaiti hospital was established as the research case study. Ten nurses and ten patients were invited to take part in the study through purposive sampling techniques outlined within a grounded theory approach. Inclusion and exclusion criteria were established to ensure that only adult patients aged 18 years old and above who will give their informed consent to participate in the study would be included. Nurses who have at least one-year experience in a surgical ward were also invited to take part in the study.

Data Analysis

Data was analysed through a grounded theory approach based on key elements of the models espoused by Strauss and Corbin (2008) and Charmaz (2006). This began with a process of data familiarisation once the interviews had taken place, followed by processes of axial and open coding, selective coding, and the generation of categories and themes. In accordance with the grounded theory methodology data analysis and collection of data occurred simultaneously. The main aim of the data analysis was to help generate theories that explain the nurses and patients' experiences in pain assessment during postoperative care in Kuwait's healthcare setting.

Results and Recommendations

The research found evidence to suggest that many patients in the Kuwaiti healthcare system in postoperative scenarios are experiencing difficulties in addressing issues relating to postoperative pain. This was evidenced by patient participants in the study who felt de-legitimised and an undercurrent of distrust between the nurses and the patients. This was mirrored in the responses of some nurses, who also expressed concern that some patients were exaggerating their pain - determining their own opinions and perhaps devaluing the direct experiences of the patients themselves. In addition the research suggests that there are ongoing social power issues in Kuwait and an apparent lack of autonomy which is creating a culture of blame. Although there are clear resource issues, it is apparent that this lack of

autonomy and the levels of distrust between patients, nurses and doctors need to be addressed urgently to ensure that postoperative pain care in Kuwaiti hospitals is improved.

In Kuwait these issues of a lack of autonomy and an apparent lack of focus on the subjective nature of pain in relation to robust assessment methods has manifested as a cultural norm. As a result there is a need to begin to address formal education of nurses, the level of power and autonomy given to nurses and the establishment of standardised pain assessment procedures more rigorously and definitively. This can be achieved by ensuring that the nurse-doctor professional relationship is improved through better communication structures, more effective training programmes in treating pain, and by challenging a culture where patient's opinions and feelings on pain are not addressed by medical professionals. This study has provided evidence based data sets which can be utilised in further developing the nursing curricula in Kuwait across both undergraduate and postgraduate nursing programmes and also across many aspects of in-service education within the hospital units themselves.

CHAPTER 1: INTRODUCTION

1.1 Overview of Work

This research has been undertaken to try and address issues relating to acute pain assessment in a Kuwaiti hospital ward. The work focuses on nurses and patients in a postoperative ward through a combination of both primary and secondary research data. The primary data was obtained from outgoing patients and nurses working on the ward and was extracted from interview data from these two research groups. The findings were analysed through a grounded theory approach to extract key theories from the work and develop them alongside a range of secondary research materials. Central to the work was looking at the process of pain assessment in Kuwait through a detailed analysis of this particular ward. This addressed issues relating to cultural influence and issues relating to autonomy and the roles and responsibilities afforded to nursing professionals in Kuwait. As a result this is a thesis which is predicated on a Kuwait study exploring phenomena that is unique to Kuwait. Although data was utilised from studies in other regions of the world the key themes and findings of this research were specific to the Kuwaiti hospital unit under assessment. The main focus of the work was in establishing a better understanding of how patients after surgery are treated in Kuwaiti hospitals in relation to reducing or relieving their suffering of pain. In addition the main rationale for the thesis was to see what barriers may exist in delivering effective pain assessment in these environments, and what can be done to overcome these barriers and improve the nursing care for postoperative patients in Kuwait.

Chapter 1 presents an overview of the work, including some background to the topic and a rationale for the main aims and objectives of the work. Chapter 2 provides a comprehensive literature review considering pain assessment and the main theories and concepts which are identified and explored through the work and the assessments of the main interview data. Chapter 3 presents the theoretical perspective underpinning the grounded theory methodology adopted. An explanation on why grounded theory methodology was chosen for this study has also been provided. Chapter 4 discusses the methods that were used in this study and how they have been applied to the data obtained in this research. This includes details of sampling techniques and descriptions of how the data was collected. This chapter also presents the main results of the work and why these have been extracted as significant during the grounded theory assessments. Chapter 5 presents the main themes that have emerged from

the verbatim transcripts of Kuwaiti nurses and patients and provides the main discussion points. This is related to the main themes of the work and how these relate to the current data on postoperative pain assessment. This chapter also discusses the implications of the findings to current nursing practice in Kuwait. Finally, chapter 6 summarises the key findings in this study and provides recommendations in nursing practice in Kuwait's hospital settings.

1.2 Background and Rationale

Despite an increasing knowledge of pain pathophysiology and pain management techniques, patients who undergo surgery are continuously experiencing a considerable level of postoperative pain (as shown in the research of Lorentzen et al., 2012; Coll and Ameen, 2006; Apfelbaum et al., 2003). In many cases it has been identified in literature that the delivery of adequate pain management is considered as a basis from which assessments can be made on whether healthcare providers are able to deliver outstanding patient outcomes and satisfaction (Lorentzen et al., 2012). When implemented correctly, proper and effective pain management can affect the ability of postoperative patients to recover quickly (Apfelbaum et al., 2003). This also evidence which suggests that there are many reports of inadequate or suboptimal pain management that consequently lead to harmful complications to patients (Brunner et al., 2009; Carr et al., 2010). These complications include delayed wound healing, deep vein thrombosis, atelectasis, increased length of hospital stay, progression to chronic post-surgical pain, and even death (Francis and Fitzpatrick, 2013; Wood, 2010; Marmo and Fowler, 2010). Additionally unrelieved pain can cause unnecessary suffering, anxiety, fear, anger and depression to the patients (Abdalrahim, 2009; Ferrell, 2005). Indeed the work of Francis and Fitzpatrick in 2013 showed that the incompetency of nurses to manage pain correctly could be a deterrent in appropriate management of acute postoperative pain – and provided a major rationale for this work.

Although pain assessment and pain management have been extensively researched over the past four decades, there are constant challenges which continue to impact various issues related to pain assessment and pain management. As a result, in many areas pain is still not being adequately assessed and subsequently managed. Nurses play crucial roles in assessing postoperative pain amongst patients undergoing surgery (Apfelbaum et al., 2003). Pain itself is often described as a subjective complaint that acts as a warning sign (Hartric, 2004). As a result ongoing assessments are necessary to evaluate any changes in pain as well as

determining how effective the management of pain will be (Abdalrahim, 2009). Assessing and managing acute postoperative pain is an important aspect of patient care and nurse knowledge of pain assessment processes and the signs of pain are critical in this regard. As a result pain and its assessment is a globally recognised challenge.

Having experienced the different nursing environments of the U.S., Australia and Kuwait there are distinct differences in the nursing practices between these three countries – however there was a particularly large difference between the U.S. and Australian systems and those in Kuwait. From the researchers' experience, pain assessment in the US and Australia is far more in-depth and requires far more explicit and focused detail on assessing the type of pain and also in referencing the individuals pain experience. In many developed countries pain assessment has been researched fairly extensively to try and develop the tools to assess and manage pain effectively and implement them in many medical settings. However, the researcher's experience of working in Kuwaiti hospitals, coupled with evidence from the review, highlighted that often the pain assessment carried out by nurses lacks an evidence base.

Having graduated in Kuwait, the researcher studied nursing in the US before returning to Kuwait to work in an operating theatre as a staff nurse. The researcher also has further experience of nursing education in Australia. The researcher noted that there were large differences in the nursing systems and nursing practices between the western hospitals in the US and Australia and the teaching framework and nursing practices Kuwait – particularly in terms of the standard of nursing in these countries. In the US, for example, when receiving patients in the operating theatres in Kuwait the patient notes received by the nurses simply stipulated 'I receive the patient with some pain' – with no other information provided. There was often no information supplied as to the severity and duration of the pain – something which should be expected in surgical situations.

As a result of this experience it was considered that pain assessment and pain management in postoperative environments may not be sufficient and robust in identifying the type of pain that patients are experiencing and how this pain is assessed. It is very important that postoperative pain is managed adequately, in order to avoid transitioning to chronic post-surgical pain that can debilitate patients for life and cause other potential problems (Wood,

2010; Marmo and Fowler, 2010). This is particularly relevant for patients and staff in Kuwait, as it is acknowledged that pain experiences are highly dependent on multidimensional factors such as age, gender, medications, previous pain and culture as per the literature reviewed on the subject and the researcher's own experience of working in nursing environments in the US, Australia and Kuwait.

In Kuwait, the Kuwait Health Network (KHN) aims to provide quality care for patients in different healthcare settings, including those in postoperative care (Aridhia, 2012). Considering the increasing demand for better health services in the next two decades, the Cooperation Council for the Arab States of the Gulf has stressed the importance of providing quality care to patients in different healthcare settings (Mourshed et al., 2006). In response to the increase in the demand for quality healthcare services, the Kuwait Health Network (KHN) aims to foster a culture of safety amongst nurses and other healthcare practitioners. This includes using evidence-based care where current practices are informed by published studies, evaluation, policies, one's experiences, expert opinion and experiences of colleagues or best practices (Aridhia, 2012).

The literature reviewed within this thesis and the primary data obtained revealed there is an existing knowledge gap regarding postoperative pain assessment in surgical nursing practice in Kuwait. In particular, there is a knowledge gap regarding the relationship of social factors and postoperative pain, which requires further investigation and evidence gathering to develop best practices in Kuwait. Where these knowledge gaps persist there may be incidences where pain is not assessed properly and the pain management methods adopted are not fit for purpose for the patient in question. This can, therefore, facilitate more harmful complications (as alluded to above) and even unnecessary suffering for the patients. In contrast a more robust method for pain assessment coupled with a greater knowledge of the theories behind pain assessment can contribute to earlier assessment and identification of the patients at risk of postoperative pain makes it possible for the patients to receive early and better pain intervention and management (Ip et al., 2009).

1.3 Pain Perception, Nurse Knowledge and Pain Assessment in Kuwait

Pain perception varies from one patient to another and the factors that have been associated with pain perception include the type of surgery or anaesthesia, gender, age, marital status,

culture, ethnicity, and psychological issues (Khan et al., 2011; Twycross, 2007; Manias et al., 2002). All these factors could influence a patient's threshold of pain (Manias et al., 2002) and suggest that pain is an inherently subjective experience. This influence on how people perceive pain is also an important aspect of nursing care in pain assessment and pain management techniques – and indicates that there are a variety of influencing factors which need to be considered when developing pain assessment methodologies. A number of studies have also revealed that the quality of care received by the patients is dependent on how surgical nurses use evidence-based practice when assessing postoperative pain (Buckley, 2000; Ubino, 2003; Mahfudh, 2011). Where nurses have a comprehensive knowledge of the theories of pain and how this should influence pain assessment methods there will be a better likelihood that the patient's pain is properly managed to reduce suffering.

It is also important to consider that where this knowledge may be lacking pain may not be properly assessed and managed. Indeed, a pilot study by Francis and Fitzpatrick (2013) revealed that nurses' poor knowledge on pain management could be a deterrent in appropriate management of acute postoperative pain. The same study also suggested that the attitude and knowledge of nurses on postoperative pain would determine also the quality of care received by the patients. It is important to note however that nurses who possess high levels of knowledge on postoperative pain might not translate this knowledge into actual practice. For instance, Twycross (2007) showed that there is no significant relationship between the nurses' knowledge on assessing and managing postoperative pain with quality of nursing practice. This would show that factors, other than nurses' knowledge on postoperative pain, contribute to the less than optimal assessment and management of postoperative pain amongst patients in surgical wards.

Most of the available research studies in Kuwait focused on determining how nurses can effectively assess and manage chronic pain associated with cancer, childbirth (Harrison, 1991), pain related to knee osteoarthritis (Mukaimi et al., 2011), or musculoskeletal pain that is not related to trauma (Al-Awadhi et al., 2004) but not on acute pain assessment and management associated with postoperative surgery. The profession of nursing in Kuwait is still under development and this is also an important factor to consider when looking at pain management. For example, there are only a few nurses who are educated at the PhD level and this may create issues in relation to doctor-nurse interactions as well as issues in establishing

nursing autonomy when related to patient management and pain assessments. In an article published in 2013, it was found that a 10-point increase in the percentage of nurses holding a Bachelor of Science education within a hospital was associated with an average reduction of 2.12 deaths for every 1,000 patients – and for a subset of patients with complications, an average of 7.47 deaths per 1,000 patients (Kutney-Lee et al., 2013). These patterns of improved performance related to education level are seen in other areas of the world (Zhang et al., 2008) and are often attributed to nurses becoming more informed of the different methods of pain assessment, the different options in pain management and also in techniques such as improved patient and doctor communication.

The researcher's own experience of teaching in Kuwait was that there was no focus on the importance of nursing as a scientific profession and how it is intrinsically linked to effective medical diagnosis and treatment. In contrast, the education received in the US, Australia and more recently the UK has shown that in many medical environments, the autonomy of nurses is championed and is viewed as an intrinsic part of effective pain assessment and pain management. This research is seen as a mechanism to establish and explore an evidence base to try and help to improve the standard of pain assessment and pain management in Kuwait by understanding why, at the moment, there is little focus on the theories of pain assessment and pain management and how nurses should apply these through greater autonomy and empowerment. At the moment there is no published study on how Kuwaiti nurses in hospital settings perform pain assessment, providing justification for this study in addressing this research and knowledge gap in current literature relating to pain management and assessment in Kuwait.

Achieving effective pain assessment is difficult and as a nursing process, it can be affected by a number of variables. These variables could include knowledge on pain cues, consistent tools for pain assessment and competency in pain assessment (Carr et al., 2010). Since pain is highly subjective, greater understanding on how patients perceive pain and how nurses could assess pain levels could help in the management of pain and improve health outcomes for the patients. Therefore, one of the key aims of this study was explore surgical nurses' approaches towards assessing pain in postoperative patients in a Kuwait hospital setting and to discover how nurses make clinical judgements about the degree of pain being experienced by patients. This study will explore, qualitatively, both the surgical nurses' own assessments of their

postoperative patients, and the patients' self-expressed experiences of postoperative pain. The grounded theory methodology will be used to explore Kuwaiti nurses' experiences with assessing postoperative pain of patients in surgical ward settings. The grounded theory approach also allowed for the researcher's experience to be utilised in the study, and helped to formulate the main research questions and objectives in line with the researcher's background. The previous experience of different nursing environments also helped to improve access to the necessary research materials to carry out the work effectively.

1.4 Research Question and Research Objectives

This study aims to explore how Kuwaiti nurses assess pain in postoperative patients in hospital settings in Kuwait and postoperative patients' self-reported experiences of pain. This study aims to address the following objectives:

1. To explore the roles and responsibilities of surgical nurses in postoperative pain assessment and how this links with the concepts of autonomy and power.
2. To determine the knowledge and perceptions of Kuwaiti nurses on pain assessment.
3. To investigate the postoperative pain experiences of patients in surgical wards.
4. To identify potential factors that could affect how patients respond to postoperative pain.
5. To explore the potential factors that influenced the nurse's assessments of pain.

1.5 Research Design

This research adopts a grounded theory approach to provide a scope and methodology for the work which allows for ongoing theory building and the emergence of concepts as data is analysed. In contrast to other forms of research this method allows the researcher to analyse the primary data obtained congruently with a literature review to allow for key theories and themes to emerge. In addition the grounded theory approach represented an inductive process through which these theories could be proposed in relation to specified research criteria and against the key aims and objectives of the research. Interviews were conducted with both nurses and outgoing patients to ensure that representative data was obtained from both those who are likely to have recently experienced pain, and those who are tasked with trying to assess pain and construct suitable pain assessment methods. The main framework for this study was the grounded theory model proposed by Glaser and Strauss (1965; 1967) – as these

methods explored the notion that analytic ideas could emerge from long conversations within interviews. This was combined with reference to the notion of symbolic interactionism to allow the research to assess the perceptions of pain in terms of how human beings interpret and define each other's actions.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Aveyard (2010) explains that a review of literature provides in-depth knowledge on a research topic through systematic search of relevant literature from academic databases, university libraries, organisational websites, white papers and grey literature. Organising information from current evidence on how nurses assess postoperative pain in different healthcare settings would be essential in determining whether there are gaps in knowledge on postoperative pain assessment. It is crucial that published studies are critically appraised for their relevance and application to nursing practice (Aveyard, 2010). The first part of this chapter discusses the search strategy conducted in retrieving literature.

2.2 Search Strategy

This chapter will present the initial findings of a literature review. It should be noted that in Grounded Theory Methodology (as adopted in this research) the data collection, analysis and literature review occur simultaneously (as discussed in the methods of Goulding, 2005). As a result only a preliminary review of literature is conducted to analyse current published literature on the topic of pain assessment and how this relates to nurses and patients. Information from this initial review of literature will be used to underpin analysis and findings of the initial sample of nurses and patients. Under the grounded theory model search terms are used to identify the literature analysed in the succeeding sections and the process of writing the literature review is a continuous process – only ending when a theory or theories have emerged from the data analysis (in accordance with the work of Glaser and Strauss, 1967). In accordance with the grounded theory methods established in Glaser and Strauss (1967) the literature review is viewed as responsive and purposive throughout this research. Goulding (2005) clarifies that continuous search of literature and analysis of published studies will allow an investigator to refine the search process and generate new key terms. During this research continuous analysis was utilised to ensure that a literature review was developed which complimented the analysis of the interview transcripts of the research participants.

To ensure that the literature review focused on the main aims and objectives of this study specified search terminology was included throughout the literature review. Initially, the

following search terms were entered in different academic databases to retrieve studies related to postoperative assessment of nurses – as outlined in Table 1.

Table 2.1: Keywords Used and Number of Hits Academic Databases

Search Term/Keyword	PubMed	Journals@Ovid / Ovid Nursing	ProQuest
Acute pain	47,901	102	29
Postoperative	525,952	59	7
Pain	496,195	735	68
Nursing	535,574	2,345	177
Acute pain AND postoperative	5,002	2	5
Postoperative pain	58,906	6	6
Nursing AND postoperative pain	2,429	1	6
Nursing AND acute pain	1,573	22	24

Databases used include PubMed, Journals@Ovid / OvidNursing, and ProQuest. The following key words used were *"acute pain" OR "postoperative" AND "pain", OR nursing* in search for related literature. Pubmed is an academic database that indexes biomedical literature and has more than 21 million citations. Most of these citations come from peer-reviewed journals and contain links to publishers. Most articles are also presented as free full text copies while those requiring institutional membership before access also have links to publishers. In contrast to the content of Pubmen, OVIDNursing is a rich academic database which includes more articles and academic papers directly related to the nursing profession and provides an extensive index of nursing journals. Proquest is provided in the university library. Hosting numerous journals, Proquest contains nursing and allied health journals.

In addition to academic journals, the Google Scholar search engine was also used to identify studies that which may have been missed in the searches which were confined to academic databases. Institutional websites such as the European Society of Regional Anaesthesia and Pain Therapy, and the American Society Pain Management Nursing were also accessed to search for policy papers, white papers and grey literature to try and ensure that a comprehensive literature review was undertaken. A manual search of literature at the university library was also conducted to extract relevant studies. The references of extracted

studies were also reviewed to determine if there are important studies that could have been missed during data extraction.

The process of gathering data from the most recent academic journals is necessary to ensure that the most recent and most up-dated information is gathered in this study. To ensure that all sources of literature are current and relevant to the study's aims and objectives, inclusion and exclusion evaluation were used in this study. Abstracts of the search results were carefully read based on the relevance to the specified topic of interest. Furthermore, all of the journals used in this study are written in English language. According to Randolph (2009), the principle of inclusion and exclusion method is to segregate relevant published studies from those that are irrelevant. As part of the research study inclusion, the gathered journals were reviewed and included or excluded based on relevance to the research topic (Cronin et al., 2008). Table 2 presents the initial inclusion and exclusion evaluation used in retrieving the studies used to inform the initial review of literature.

Table 2.2 Evaluation of Inclusion and Exclusion Criteria

Inclusion Evaluation	**Exclusion Evaluation**
• Studies related to nursing and postoperative pain conducted in the last 10 years (2003-2013) • Studies published in English • Studies that recruited adult patients only (18 years old and above) • Studies that involved patients who were assessed for pain during postoperative care • Studies that recruited patients who underwent surgical procedures, regardless of the type of procedure, were included	• Studies that recruited young people (age less than 18) and children were excluded in the review • Studies that are not published in English • Studies that were published more than 10 years ago

Studies that were published in English in the last 10 years that recruited nurses who assessed the level of pain amongst patients in postoperative care were included in the review. Setting the time frame to the last 10 years would ensure that only the latest evidence on pain assessment is included in the review and that any arguments presented during this research which referenced literature obtained during the literature review would be based on extracted studies that reflected current practices in nursing pain assessment. Although older studies could yield important information on how nurses assess pain amongst patients post-surgery, the findings of these studies might not be relevant in the context of current nursing practice. For instance, older studies might reflect old evaluation that is now replaced with evidence-based evaluation. Hence, extracting recently published studies would provide evidence that could be applied in today's nursing practice. It should be noted that healthcare is more complex today than 10 years ago and requires nurses to be more responsive to the needs of the patients. Literature in the last 10 years could provide sufficient background on how the dynamics of pain assessment for patients in postoperative care has evolved.

The Critical Appraisal Skills Programme (CASP) tools (CASP, 2010a; 2010b) are used to critically appraise the studies. These tools contain 10 questions that investigate the credibility and validity of the findings of the study. The author's background, methodology and methods used, sampling, data collection, analysis and conclusion and recommendations are all evaluated. In general, data collection is a significant part of a successful literature review (Randolph, 2009). After pre-screening the journals found after entering the key words and phrases on the databases of PubMed, Journals@Ovid / OvidNursing, and ProQuest, the articles used for this study were established, and have all been detailed in the reference list provided at the end of this research. The researcher acknowledges that with the use of grounded theory methodology, the literature review of this research proposal provides initial findings and could be restructured or expanded to accommodate emerging themes from the interview transcripts. As a dynamic process, the main themes presented below will initially underpin any emerging theories on nursing pain assessment. Familiarity with the literature and concepts surrounding pain assessment in the post-surgical nursing setting will also support sensitivity of the researcher during the analysis and the ability to interpret the results of the study.

2.3 Main Themes of the Literature Review

Goulding (2005) explains that in Grounded Theory Methodology, a literature review is undertaken simultaneously with data collection and analysis. This means that while a preliminary review of literature is conducted in the present study, the emergence of new themes during data collection and analysis will help form the final literature review of the present study. In the initial review, five major themes emerged from the search of literature and critical evaluation of retrieved studies. These are: Aetiology of pain; nurses' role in pain assessment; using rating scales to assess pain; pain management; and factors that may affect how the patients respond to postoperative pain. Sub-themes under factors that may affect how patients respond to pain include the following: type of surgery; age; culture, race and ethnicity; and psychological issues. Each of the themes will be discussed and supported with current literature.

2.3.1 Overview of the Aetiology of Pain

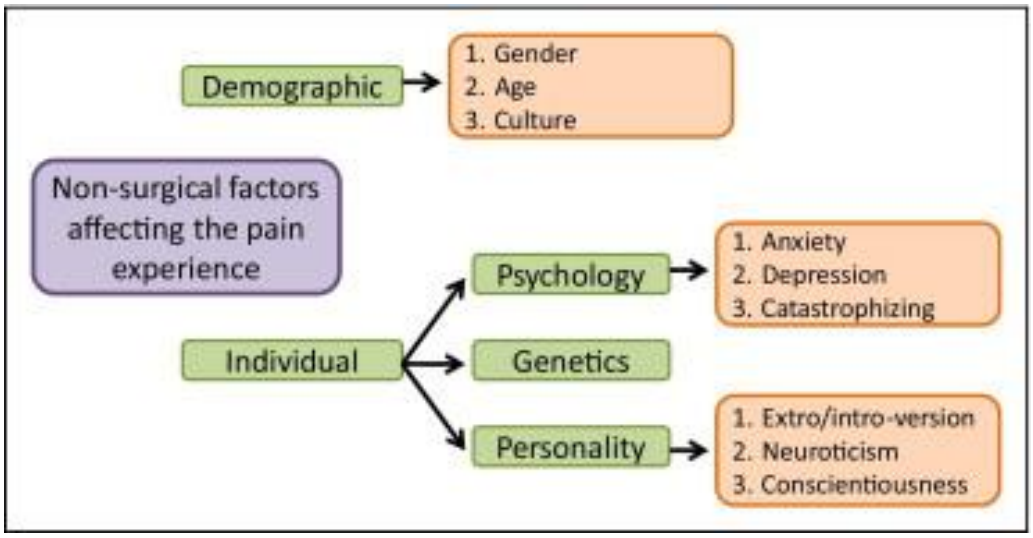
In general, pain is defined in literature as an "unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (International Association for the Study of Pain, 1994, p.1). It is classically categorised as either acute pain or chronic pain. Acute pain is usually of recent onset (from seconds to 6 months) and is commonly associated with a specific tissue injury (Brunner et al., 2009). In contrast chronic pain is pain lasting for more than 6 months and is in most cases not associated with a specific injury. Chronic pain can occur in association with a previous injury, continuing once the injury has healed (Brunner et al., 2009). A post-surgical pain can result from a specific tissue injury following a surgical operation (White et al., 2010). It is common, therefore, for postoperative patients to experience an acute onset of pain while being admitted inside the ward (Grinstein-Cohen et al., 2009; Buyukyilmaz and Asti, 2010; Su et al., 2010; Duncan, 2011).

When left unmanaged, a constant pain that prolongs the body's stress responses can trigger a range of other health complications such as suppressed immune functions, increased cardiac risk, and increased susceptibility to hormonal imbalance (Wells et al., 2008; Pasero, 2009; Wood, 2010; Marmo and Fowler, 2010). Therefore, to improve the postoperative patients' health outcomes it has been suggested in literature that surgical nurses should improve their knowledge on pain assessment and management techniques (Brunner et al., 2009; Carr et al.,

2010). According to Manias et al. (2006) when nurses do not have sufficient knowledge on the severity of pain experienced by the patients or are familiar with factors that influence pain, this could result to passivity in healthcare management. It means inadequate knowledge with regard to the use of effective and reliable pain assessment tools can result to decrease in the quality of care given to patients who have undergone surgery. To prevent the delivery of passive healthcare services to postoperative patients, it is necessary to study how surgical nurses will effectively assess pain if the postoperative patients are complaining of such discomfort. This research looks to build on the findings of Manias et al. (2006) by looking at pain management in Kuwait to establish if certain demographical characteristics and cultural issues can impact pain assessments in postoperative situations, and the relationships between nurses and patients which may also influence these patterns.

The Gate Control Theory of Pain (Melzack and Wall, 1965) is one of the oldest theories that clearly explain why and how the human thoughts and emotions can be affected by pain perception. In line with this, the Gate Control Theory of Pain strongly suggests that pain is a biopsychosocial phenomenon that involves psychological aspects (i.e. cognitive, sensory and emotional) on top of the physiological aspects of pain, which acts upon as a gated control system (Melzack and Wall, 1965). This theory identifies that the synapse on projection cells normally acts as the gate control of pain. Each time an input is received by either the small or large nerve fibres, the projection neurons will automatically open and send signals to the brain; and vice versa (as identified in Melzack and Wall's study). Many authors agree with the idea that the Gate Control Theory in pain is a complex phenomenon involving physiology, cognition, social and emotional complexes (Manias et al., 2002; Carr et al., 2010). Since the pain experiences of the patients is highly dependent on multidimensional factors such as age, gender, medications, previous pain and culture (Carr et al., 2010; Khan et al., 2011), the individual pain perception of each patient is unique and different from other patient's perceived level of pain. Figure 1 illustrates a summary of different factors affecting the patient's pain experience.

Figure 2.1: A summary of the individual and demographic factors affecting pain experience (as detailed in Khan et al., 2011)



As described by McCaffery and Pasero (1999), pain is highly subjective and only the individual complaining of pain could verify that pain is indeed experienced. Many researchers have put forward that the theory of pain involves multidimensional factors that contribute to the pain experience such as age, gender, medications, previous pain, culture, ethnicity and race (Manias et al., 2002; Burchiel, 2002, Carr et al., 2010; Duncan, 2011; Khan et al., 2011). Taking all of this into account, pain is believed to be a subjective phenomenon or is purely based on the personal experience of the person involved. Despite the subjectivity of the experiences of pain, the use of a self-reporting strategy is still considered as the gold standard when assessing pain. Despite this some research has shown that there are limitations to this approach. In 2011 research by Duncan established that aspects of self-reporting had significant limitations and established that, when looking at epidural analgesia for major abdominal surgery across patients in the Lake District, there is no correlation between chronic pain before surgery and the levels of postoperative pain experienced by patients.

The work of Duncan (2011) suggests, therefore, that pain is highly subjective, and that patient reporting could vary widely across different groups - for instance, one patient could have high level of pain tolerance compared to the second patient. This variation in pain tolerance for the same type of surgery could have an influence on how nurses should assess and manage pain. Khan et al. (2011) also highlighted that culture plays an important role in predicting the levels of pain experienced by an individual. In the Western culture, pain is

normally associated with surgery and it is the patient's right to be offered interventions to alleviate the level of pain. In countries that have poor medical services and for which interventions for pain are not as sophisticated as in highly developed countries however this process is not always the same. In this regard culture, refers to social behavioural and attitudinal norms, beliefs, values and knowledge affects the expression, attitude toward, expectations, remedies and perceptions of medical care, healthcare practice, and receptivity to medical intervention for pain (Campbell and Edwards, 2012; Lasch, 2002).

Pain is the most common symptom that prompts patients to seek urgent care from a health professional however there is evidence which suggests that postoperative patients are still receiving suboptimal pain assessment and management from the healthcare professionals – and that this is often problematic in the care received from the nursing community (Carr et al., 2010, p.5; Marmo and Fowler, 2010; Brunner et al., 2009; Cade, 2008; Coll and Ameen, 2006; Manias et al., 2006; Apfelbaum et al., 2003; Odhner et al., 2003). As compared to postoperative patients who can verbally describe their pain, it is more difficult to assess pain when the patient is unable to verbalise the level of their discomfort (Odhner et al., 2003). To overcome this issue which has been established in previous literature this study included descriptions of these pain experiences by including non-verbalised communication and including patients who were able to respond to questions about pain by identifying the level of pain using appropriate pain scores would. Patients who could not verbalise and identify the appropriate pain scores were excluded from the study. Understanding the aetiology of pain is crucial in determining whether nurses possess sufficient knowledge on the causes of pain and the factors that influence pain perception of patients. The initial findings on the aetiology of pain will also support emerging theories from this study.

2.3.2 Nurses' Role in Pain Assessment

It has been noted in some research that the management of postoperative pain "is a fundamental human right and should be the cornerstone of ethical, patient-centred nursing practice" (Wood, 2010, p.10). While all healthcare practitioners are responsible for ensuring that human rights of the patients are met, surgical nurses are often the first point of contact for most patients post-surgery and spend more time with them than other healthcare professionals. It is vitally important, therefore, that nurses know how to properly observe and manage the patients' pain after undergoing a surgery (Ubino, 2003; Mahfudh, 2011;

European Society of Regional Anaesthesia and Pain Therapy, 2011). As part of assessing the postoperative patients' pain, surgical nurses should observe the patients' pre-operative condition, but also the site, nature and duration of surgery, the type of incision, and the amount of intraoperative trauma. It is also necessary to observe the type of anaesthetic management done during the operation, signs of serious complications related to the operation, and the overall quality of postoperative care (Burchiel, 2002, p.257).

Nurses are not limited to assessing and managing pain, but should also place the interest of the patients first (White et al., 2010). As stressed by Mahfudh (2011), nurses should not limit their roles to "giving tender nursing care, preventing pain, educating the patients and their love ones, advocate, communicate, comfort, support, and give counselling to the patients" (p.846). Instead Mahfudh (2011) suggests that nurses should also ensure that patient's rights and social justice are observed during assessment and management of pain (ideas which are further supported by the American Society Pain Management Nursing, 2011 and the American Society of Anesthesiologists, 2004). Postoperative pain is critical in this regard because it is a common problem which many nurses will have to encounter in their professional lives. Postoperative pain is a common event that follows after a surgical operation (Brunner et al., 2009; Carr et al., 2010; Wood, 2010) and, as such, is a condition which is frequently experienced by many patients in surgical wards.

When looking at issues around postoperative pain it is important that nurses consider that they have an important and proactive role to play in terms of assessing postoperative pain irrespective of their own clinical experiences and professional expertise (as discussed in DiCenso, 2005). Aside from anticipating the pain needs of patients in respect to their personal beliefs and cultural context (Mahfudh, 2011), surgical nurses be able to develop mastery on the following tasks: a) monitoring patients' postoperative status; b) assessing patients' postoperative pain; c) believing the patient's pain and documenting the pain; d) identifying the source of the pain; e) planning appropriate care plan; f) administering prescribed analgesia; g) monitoring and evaluating efficacy of pain relief; and, h) ensuring good pain control and an individualised treatment (Mahfudh, 2011; Ubino, 2003; Buckley, 2000). Indeed, evidence from recent research has shown that complications in postoperative scenarios are significantly reduced when patients are constantly monitored during postoperative care (Elshamy and Ramzy, 2011). This concept is supported by the Department

of Health (2010) who have emphasised that there should be regular assessments of postoperative pain when the patient moves or is at rest. Vickers et al. (2009) also explain that vital signs are assessed and monitored after surgery. Overall these investigators explain that pain assessment should also be regularly done and considered as the fifth vital sign (Vickers et al., 2009).

According to Briggs (2003), pain assessment involves a complex nursing skill that evolved around the nursing practice. When dealing with patients who are experiencing pain, surgical nurses should be clinically competent enough to consider and respect the patients' social, religious, and cultural beliefs (Mahfudh, 2011). In general, failure to consider the patients' social, religious, and cultural beliefs can lead to the development of more conflict due to miscommunication between the nurses and the patients. Furthermore, postoperative pain assessment involves a number of complexities that could be barriers to effective pain assessment (Manias et al., 2002). To prevent unnecessary conflict between the nurses and the postoperative patients, surgical nurses should be aware of such complexity. To avoid the range of issues associated with these problems, self-reporting pain is often considered to be the most reliable indicator of pain (McCaffery and Pasero, 1999; Herr et al., 2006). It is, therefore, the duty of surgical nurses to be able to convince and persuade the postoperative patients to willingly participate throughout the entire assessment period. When conducting a self-reporting strategy in assessing the patients' pain, surgical nurses should observe the most common postoperative pain signs and symptoms such as "throbbing", "tiring", "troublesome", and "nagging" (Buyukyilmaz and Asti, 2010).

Applicable to postoperative patients who are unable to self-report pain, surgical nurses should observe the following evaluation (as outlined in Pasero, 2009, p.51):

1) Consider the patient's condition or exposure to a procedure that is thought to be painful and assume pain is present, if appropriate;
2) Observe behavioural signs that suggest pain such as crying, change in activity, facial expressions, and so on;
3) Evaluate physiologic indicators that may signal other causes of pain; and conduct an analgesic trial to confirm the presence of pain and to establish a basis for developing a treatment plan if pain is thought to be present (Pasero, 2009, p.51; American Society Pain Management Nursing, 2011).

All postoperative patients have the fundamental right for their pain to be well managed by surgical nurses. Since pain assessment and management technique may change over time, it is ideal for nursing staff to regularly update their training on pain physiology, pharmacology of analgesia, monitoring of postoperative care plan, and documentation of postoperative pain assessment and management (European Society of Regional Anaesthesia and Pain Therapy, 2011, p.30). In addition, with greater globalisation, given documented cultural and ethnic differences in pain perceptions, and effects and responses to pain treatment (Campbell and Edwards, 2012), nurses should remain culturally competent and informed in adjusting the care plan for a patient.

2.3.3 Using Rating Scales to Assess Pain

Pain assessment is often done through the use of rating scales. The first step and perhaps the most critical aspect of initial pain assessment and the cornerstone of pain management is the nurses' ability to assess pain (American Society Pain Management Nursing, 2011; Carlson, 2009; Pasero, 2009). For surgical nurses to effectively administer prescribed pain relievers and implement other effective pain management plan to postoperative patients, surgical nurses should have sufficient knowledge in conducting post-op pain assessment. This is a fundamental issue in many surgical units where nurse training is not prioritised and regular updated training schedules are not encouraged. It is also important to note that it is difficult to accurately assess the patients' pain not only because pain is subjective but also because of other factors that can affect the patients' willingness to discuss or describe their pain with the healthcare professionals (Manias et al., 2006; McCaffery and Pasero, 1999).

As previously referenced the difficulty in establishing postoperative pain and implementing effective pain assessment methods has ensured that the self-reporting of pain remains the first step in the recommended framework for pain assessment (Pasero, 2009; American Society Pain Management Nursing, 2011). It should be noted, however, that self-reporting is influenced by culture, gender, age, cognitive ability, relationship between the patient and the nurse (American Pain Management Nursing, 2011). Culture and the relationship between patient and nurse are important issues since the manner in how nurses assess pain might influence how patients perceive pain. This could also pose a considerable challenge if the nurse has a different ethnic background than the patient (as discussed in Narayan, 2010). Narayan's 2010 study looked at minority patients in the US health service and found that

when patients belong to a culture or speak a language that is different from that of their health care provider there is inherent difficulty for managing the patient's pain effectively. Culture is also able to influence and impact how pain is received. For example Pasero (2009) looked at culture in pain perception and found that some patients might opt to endure the pain while others might perceive that pain is normal – suggesting that interventions are required from healthcare professionals in effective pain assessment (rather than relying on self-reporting alone). In many instances, Pasero's (2009) work showed that nurses with a similar ethnic background as the patient could understand the evolution of pain in more depth compared to nurses with different ethnic backgrounds (Pasero, 2009). As a result this research demonstrated that it is important to explore in this present study how culture of the patient and the nurse influence the assessment and perception of pain.

The research papers outlined above show that although nurses can verbally assess the patients' pain, surgical nurses should always consider the idea that not all postoperative patients are able to verbalise their pain; for example patients who may have experienced strokes or very young or elderly patients who may not be able to converse or express themselves sufficiently to explain the pain they are experiencing. As a result it is important for surgical nurses to observe signs of physiological, emotional, cognitive, and social dimension of pain. For example, the nurse assessing the pain should consider the patients' nonverbal methods of communication such as facial expressions – often with communication in these instances coming through physical factors such as grimacing, muscle tension such as resistance to passive movements, or changes in vocalisation caused by crying or sobbing as a clear indicator of patients' pain (Gelinas et al., 2006).

Studies conducted by Apfelbaum et al. (2003), Lorentzen et al. (2012), Marmo and Fowler (2010), and Cade (2008) have investigated how patients assess their level of pain after surgical procedures. Apfelbaum et al. (2003) interviewed a random sample of 250 adults who had undergone surgical procedures in the United States. After examining the patients' experience of pain before and after surgery, the study concluded that based on the patients' subjective recall of their own experiences, almost 90% of them were happy with their pain medications. In contrast, the patients recalled that despite being satisfied with their pain medication, they still perceived that pain was under-managed. Since the study was quantitative and only utilised the survey method to gather information on the patients'

experiences following surgery, the researchers failed to determine the reasons why the patients felt that their pain was under-managed. Patients who experienced pain relief as a result of pharmacologic interventions might still feel that the care they received is still not optimal and a number of the patients might feel that pain is under-managed. This suggests that pharmacologic interventions for pain are not sufficient to increase the quality of care. A focus on non-pharmacologic interventions and the manner in which nurses provide care or assess pain during recovery should be made to improve the quality of care received by the patients and is an important element of this research.

In a cohort study by Lorentzen et al. (2012), similar findings to Apfelbaum et al. (2003) were obtained. Lorentzen et al. found that the majority (88.4%) of the patients surveyed admitted to being satisfied with the pain treatment they receive. Despite this almost fifty percent, of the postoperative patients revealed that they encountered uncontrollable pain with moderate to severe intensity – showing that there may be a gap in actual practice in terms of recognising pain (Lorentzen et al., 2012). In this regard it could be surmised that nurses might fail to identify the periods where the patient is most vulnerable to pain and immediately assess pain levels. It could also be considered that should the nurse be able to identify this period, they may have missed important clues that would have informed them that patients are suffering moderate to intense pain. While nurses perform pain assessment, the studies of Apfelbaum et al. (2003) and Lorentzen et al. (2012) reveal that there is still a gap between pain assessment and immediate interventions for pain.

As alluded to earlier, it is suggested that identifying the patients' verbal expressions and other nonverbal signs of pain could help alleviate pain immediately. This would be especially helpful in sedate patients or those who are unable to communicate immediately following surgery. Cade (2008) conducted a systematic review on five research studies to examine the reliability of critical care pain observation tool, non-verbal pain scale, and behavioural pain scale when assessing pain among a large group of sedated patients. Based on the research findings, Cade (2008) revealed that it is best to implement the use of behavioural pain scales in intensive care units to improve pain management among the sedated patients. Even though Gelinas et al. (2006) conducted a research study to test the validity of the critical care pain observation tool among the adult patients, Cade (2008) argued that Gelinas et al. (2006) failed to test its internal consistency, its domain structure, and its application to different

critical care population. During this research verbal patients were recruited for analysis in terms of their opinions on pain management, however, by adopting a grounded theory approach the data collection and analysis occur simultaneously. This allowed for the inclusion of non-verbal patients later on in the analysis should this have become a requirement. As non-verbal pain assessment was not included in the principle aims and objectives of this work, it was not considered to be a critical issue. In the present literature review, non-verbal pain scale and behavioural pain scale are validated tools and used to assess pain levels amongst non-verbal patients.

Odhner et al. (2003) also tested the reliability of nonverbal pain scale when assessing the pain of non-verbal critically ill adults. With regard to the usefulness and reliability of the non-verbal pain scale, the research finding of Odhner et al. (2003) is similar to Marmo and Fowler (2010). After conducting a research study that aims to assess pain control among the non-verbal patients who are critically ill, Odhner et al. (2003) mentioned that the use of non-verbal pain scale is reliable in terms of enabling the nurses to assess the non-verbal patients' pain. Contrary to the research findings of Odhner et al. (2003), Cade (2008) argued that there are no concrete evidence showing that non-verbal pain scale is a reliable tool when assessing the non-verbal patients' pain since Odhner et al. (2003) failed to show adequate testing method with regard to the application and reliability of the non-verbal pain scale. One of the common problems associated with pain assessment or measuring pain is that there are cases wherein the pain scores can be high but the patients appear satisfied. For instance, the use of the rating scales for pain assessment such as the uni-dimensional pain intensity scales, numeric rating scales or visual analogue scales may not accurately measure the actual pain that the patient is experiencing (Pasero, 2009). As pain is often subjective, the different pain thresholds of individuals could dictate the results of the rating scales.

Manias et al. (2006) also argued that increased levels of pain that the patients are feeling could be associated with fear. Pasero (2009) also explained that some patients might be anxious about their condition during postoperative care. Anxiety could increase the levels of pain perceived by the patients (Manias et al., 2006). Due to the presence of gaps when assessing the levels of patients' pain, it is difficult to determine whether or not the healthcare professionals are successful in terms of managing the patients' pain since the patients can be happy with their pain medication but at the same time experiencing a lot of physical

discomfort caused by pain. In all cases, establishing a two-way communication between the nurse and the patients is necessary so that the nurses can properly assess the patients' pain and deliver pain management solutions accordingly. Even though Apfelbaum et al. (2003) conclude that pain were under-managed amongst the postoperative patients, the authors failed to address how nurses can effectively bridge the communication gap that is present between nurses and patients.

2.3.4 Pain Management

Throughout this study the concept of pain management was an important consideration. The idea of pain management is complex, and although historically it has been based on information about patients obtained from medical records or through observation, it is considered that a more robust assessment is required. This assessment should include an extensive examination of the question about whether or not patient pain is adequately managed, addressing different strategies for pain management across different populations and social groups, and also looking at interviewing nursing staff involved in patient pain care to assess their perceptions of patient pain and exactly how it was managed. This research looks at providing a starting point for these issues, by looking at pain management in both patient and nurse populations and seeing how this is influenced by social issues such as culture, training, and communication. In its most general terms pain management is considered to be the response to pain with the goal of treating the pain in order to subdue or eliminate that pain. It is important to differentiate this from the notion of pain assessment which involves the evaluation of the severity of pain a patient is experiencing.

For pain management to be successful it must include appropriate assessment and intervention of the pain. Although the focus of the present study is to explore the factors that influence nurses in assessing the level of pain of the patients during postoperative care, a review of literature on pain management has also provided information on how nurses manage pain after assessing the patient's condition. For example in Manias et al. (2006), a single-group non-comparative study on 52 nurses and 312 patients was done in order to identify the best nursing strategies for managing pain in postoperative patients. This was conducted by the researchers by studying and observing nurses during actual care – providing first-hand observations of pain management. It is important to note, however, that utilising this approach may increase the risk of bias during data collection by introducing researcher

perceptions and nurses behaving differently due to the visible presence of another. After observing 316 pain activities, Manias et al. (2006) found out that the most common strategies used in pain management included; patients acting as a passive recipient for pain relief (60%), problem-solving strategies (23%), and active negotiation (17%). Because the nurses were aware that they were being assessed, it is important to consider the work of Polit and Beck (2008), who have found that when nurses are aware that they are observed during patient care, their adherence to care evaluation is often very high (Polit and Beck, 2008). Despite this risk, Manais et al. (2006) stated that observations were randomly done to reduce the risk of bias.

Apfelbaum et al. (2003) also carried out research which suggests that the pain of postoperative patients remained undermanaged in many circumstances. Apfelbaum et al. (2003) conducted a study on 250 US postoperative adult patients and found out that 86% of the research survey respondents who had postoperative pain experience had moderate, severe, or extreme pain even after they were discharged from the hospitals. In relation to the large number of postoperative patients who are experiencing severe levels of pain after surgery, Coll and Ameen (2006) explained that the "lack of knowledge with regard to the proper assessment and management of pain" (p.178) can be one of the major factors that can affect the ability of the nurses to manage the patients' pain experiences. As a result it is clear to see that the level of knowledge of the nurses on management of pain is critical in determining whether patients would experience reduction of clinical pain.

Twycross (2007) conducted a study to determine the association between the nurses' knowledge on pain management and the quality of their practices. This study was conducted amongst 13 nurses in a surgical ward who were shadowed for 5 hours during 2-4 shifts. Findings of this study were important since it showed that there were no significant relationship between the nurses' theoretical knowledge and the quality of care received by the patients (Twycross, 2007). The investigator during this research compared the nurses' scores on pain management knowledge test with observational data – for example during shadowing, nurses' adherence to care evaluation and checklists was compared against their scores on the patient pain management test. The absence of correlation between the nurses' knowledge and actual practice in the study by Twycross (2007) suggested that translation of knowledge to actual practice is not often observed in actual hospital settings. The findings of

this study might offer an explanation why management practice of pain remains to be poor even in the presence of evaluation on management of pain. It is important to note, however, that a critique of the study reveals that it has a very small sample size, which limits the applicability of the findings to a larger and more heterogeneous population (Coughlan et al., 2007). Although the findings were important to nursing practice, it could have been further limited in terms of its applicability as it was only conducted in one hospital setting.

Pain assessment is essential in reducing pain and discomfort of patients. Since assessment is related to pain management, it is also essential to test the knowledge of nurses on pain management. Francis and Fitzpatrick (2012) conducted a pilot study to determine knowledge and attitude of nurses on postoperative pain. A convenience sample of 31 nurses was recruited to participate in the study all of whom had worked in urologic and gastrointestinal surgical units. A convenience sample of 14 patients who were managed by the nurses was also recruited. The questionnaire Knowledge and Attitudes Survey Regarding Pain was utilised by the investigators to measure the nurses' level of knowledge on pain management in addition to which the patients completed the Short-Form McGill Patient Questionnaire (SF-MPQ) to measure their level of pain intensity. The SF-MPQ is a valid and reliable instrument, having been tested and used in numerous research studies. In this study it was found that the majority of the patients reported moderate pain while the nurses' mean score on the questionnaire was only 69.3% (Francis and Fitzpatrick, 2012). This suggested there is a real pressing need to increase the knowledge levels of nurses on pain management in surgical settings. Again it is important to note, however, that a critique of this study would reveal that since convenience sampling was done on a small population, the findings were only applicable to the hospital setting where it was conducted (Coughlan et al., 2007). Despite this apparent limitation the findings of this research still have important implications in nursing practice since it suggested that the level of knowledge about pain, pain assessment, and pain treatment that nurses possess are important in influencing the type of care received by the patients.

Increasing the nurses' knowledge on general postoperative pain is seen as the key toward effecting pain assessment and management. This is seen in the study of Abdalrahim et al. (2011) who looked at nurses who had undergone a postoperative pain management programme in a university hospital located in Jordan. A total of 65 registered nurses

participated in the programme and a pre and post-intervention questionnaire was used to determine if there were significant differences in the level of knowledge before and after the programme. Findings of the study showed that mean scores significantly increased by 75% (Abdalrahim et al., 2011). Importantly, documentations from the patient care audit also showed significant improvements, with care improving by around 85% (Abdalrahim et al., 2011). A review of the study revealed that this was conducted in a large teaching hospital in Jordan and audited 250 patient records. The study also suggested that a postoperative pain management programme could significantly improve nurses' knowledge on pain management while also improving the care received by the patients. In this study, improvement of the nurses' knowledge also positively influenced the level of care received by the patients.

The findings of Abdalrahim et al. (2011) are also observed in the study of Zhang et al. (2008), which was conducted in two teaching hospitals in China. Zhang et al. (2008) recruited 196 nurses and randomly assigned them to a control and experimental group. Nurses in the control group attended a five-week session of Patient Education Programme (PEP) involving focus education, individual instruction and group activity. Nurses from the intervention groups were then assigned to assess pain levels of the patients using the Changhai Pain Scale. Findings of the study showed that the nurses' score on the knowledge and attitude survey on pain management significantly increased from baseline and after intervention (Zhang et al., 2008). In addition, the percentage of nurses who accurately utilised the Changhai Pain Scale also significantly improved after the PEP (Zhang et al., 2008). There is also an increased use of the assessment tool in the intervention group compared to the control group. In this study, the use of the Pain Education Programme significantly improved the nurses' knowledge on pain, assessment and attitudes. Both Abdalrahim et al. (2011) and Zhang et al. (2008) showed that nurses' knowledge on pain, management, assessment and attitude could significantly improve with a programme on pain education. In contrast to the study of Abdalrahim et al. (2011), Zhang et al. (2008) failed to assess whether the quality of patient care also improved after the Pain Education Programme in the two teaching hospitals in China. This could have further strengthened the findings of the study and correlate increased knowledge on pain management amongst nurses with improvements in quality of care received by the patients.

The research reviewed in this section suggests that pain assessment and management could be improved with increasing the levels of knowledge on pain amongst nurses in healthcare settings. This is supported by research which demonstrates that pain management appears to be correlated with high levels of knowledge on pain. This is clearly a critical issue in postoperative situations, and is a key aspect of this particular research. This review has also demonstrated that there are a variety of influencing factors which can impact on pain assessment and pain management in many surgical units – such as cultural differences, and methods of understanding different forms of communication. All of these have an impact on elements of pain management and need to be effectively referenced in nurse training on pain management. It is also important to consider, however, the work of Twycross (2007) who suggested that despite high levels of knowledge on pain, nurses often failed to translate this level of knowledge in actual practice. It should be noted that this particular study was conducted on a very small sample population and could not be generalised to a larger group of nurses, however its findings do represent an important avenue for enquiry when considering pain management in the nursing profession.

2.4 Patients' Response to Postoperative Pain – Influencing Factors

In the succeeding sections the sub-themes presented represent factors that have been considered as some of the main influences on patients' responses to postoperative pain. These will be discussed critically against pertinent literature to establish patterns within postoperative pain management and assessment specifically to provide comparable data for the findings of this research. The main factors which will be discussed in this study are the type of surgery which has taken place, social and demographic factors including gender, age, culture, race and ethnicity and psychological issues.

2.4.1 Influencing Factors in Responses to Postoperative Pain - Type of Surgery

To date, there are no studies supporting the idea that the type of surgery can contribute to different pain intensity, occurrence, quality and duration of postoperative pain suggesting that surgical procedure does not influence these issues. For example, there are studies suggesting that some people who have major surgery can have a minor pain experience whereas others who have a minor surgical procedure have a major pain experience (Lorentzen et al., 2012; Augsornwan et al., 2011; Parry et al., 2010; Apfelbaum et al., 2003). Because of this variation, it is clear from the data that these authors have presented that surgical procedure

does not influence the pain at all but instead influence how patients may use different words to describe their pain. Lorentzen et al. (2012) argued that some patients who complain of major pain following a surgery could be experiencing anxiety, which could further exacerbate the feelings of pain. In contrast there are also patients who undergo major surgical operations who have high threshold of pain, and therefore, have higher pain tolerance (Lorentzen et al., 2012).

2.4.2 Influencing Factors in Responses to Postoperative Pain - Gender

Following a surgical procedure, Brunner (2009, p.237) revealed that women in general have lower pain threshold levels, higher pain intensity, experience more pain unpleasantness, and more fear when compared to male patients – a statement which has been further verified by the work of Leegaard et al. (2010) and Parry et al. (2010). Leegaard et al. (2010) conducted a qualitative study on 10 women who had postoperative pain and problems after a cardiac surgery. Leegaard et al. found that the female patient's postoperative pain interfered mostly with their sleep, general activity, and their ability to perform domestic housework and that the overall postoperative pain amongst these women progressed to interfere with their activities of daily living after early discharge from the hospital (Leegaard et al., 2010). Again one of the criticisms of this work has been that it was carried out on a relatively small sample size – suggesting that the researchers would not be able to defend the notion that whatever pain and problems the ten female patients had experienced after receiving a cardiac surgery could necessarily be the same pain experiences of other women who will be receiving a cardiac surgery. Despite this limitation the work was important in establishing that the experiences of these women suggested that there are variations to the perception of pain (Leegaar et al., 2010), which merits attention amongst nurses and other healthcare practitioners. Although these women were interviewed after their surgery and might demonstrate bias in memory recall, the study showed that there might be a gap in practice. Gaps in care that were highlighted were issues such as the lack of postoperative pain care in their home settings which could present itself as a potential future area of research.

A critique of the study of Leegard et al. (2010) shows that the work was well conducted and that the relevant ethical frameworks were followed and addressed. This included making the female patients who agreed to take part in the study aware of the overall aims and objectives of the work, and ensuring that informed consents were obtained prior to their participation.

This was an important element of the ethical framework for the research undertaken throughout this study. One potential barrier in Leegard et al.'s 2010 work was that it was conducted only on female patients. It could be suggested that including male patients in the research design may have helped to improve the validity of the findings by allowing for more comparisons between the two groups and allowing for findings that could potentially have demonstrated whether gender difference in the perception of pain does exist. This limitation is overcome in this research by ensuring that the inclusion and exclusion criteria noted in the methodology for the targeted sampling process made reference to the need for the inclusion of both male and female participants.

In looking at gender as an influencing factor in responses to postoperative pain, a comparative study by Parry et al. (2010) has also supported the significance of gender difference in the pain responses of men and women. Parry et al. (2010) compared the experiences of men (n=78) and women (n=17) after coronary artery bypass graft (CABG) surgery. The study showed a statistically significant difference between these two groups – showing that more women reported moderate to severe pain with movement, and greater interference with walking and sleeping due to postoperative pain (Parry et al., 2010). Again reference is given to the fact that the sample size used by the authors greatly matters when it comes to the accuracy of a generalised data. Due to the small sample sizes of men and women, the study of Parry et al. (2010) cannot be considered as strong scientific-based evidence that can prove that gender differences can really affect how men and women respond to pain, however it does provide an important insight into the potential patterns of postoperative pain which may exist when comparing male and female populations. Gender roles may be associated with these differences because society assumes that women have more of a responsibility to care for their family (Greenberg et al., 2010). For this reason, the research study of Leegaard et al. (2010) strongly suggests that domestic responsibilities of women at home can contribute to how women responses to postoperative pain experiences. However, Parry et al. (2010) recognise this idea as a study limitation and that further studies should be considered in the future.

In contrast to much research which has highlighted the differences that gender plays in postoperative pain (Parry et al., 2010; Leegaard et al., 2010), there has also been research undertaken which suggests that gender may not be a key factor in determining the level of

postoperative pain. To identify the independent predictive factors for postoperative pain and analgesic consumption, Ip et al. (2009) conducted a qualitative systematic review of 48 studies with 23,037 patients. Using a total of four significant predictors for postoperative pain (i.e. pre-operative pain, anxiety, age, and type of surgery), Ip et al. (2009) found out that the type of surgery, age, and psychological distress are among the significant predictors for analgesic consumption, and indicated that gender was not one of the key factors as has been suggested in other work. As compared to the study of Leegard et al. (2010) and Parry et al. (2010), the systematic review of Ip et al. (2009) is better and more reliable because the authors were able to gather a larger population size in their study (i.e. a total of 23,037 patients postoperative patients from 48 eligible studies). Furthermore, Ip et al. (2009) managed to use explicit methods to perform a thorough review of the research studies in a thorough and orderly manner. Since the research findings of Ip et al. (2009) was based on a total of 48 eligible studies, the authors were able to come up with new information based on scientific-based studies.

2.4.3 Influencing Factors in Responses to Postoperative Pain – Age

Another important influence when considering perceptions of pain is age. Indeed, in a qualitative systematic review, Ip et al. (2009) revealed that younger people are at a higher risk of pain and require more postoperative pain or analgesic management than older persons (Ip et al., 2009). This particular research finding serves as clear evidence behind the link between age and postoperative pain. Using the McGill pain questionnaire (MPQ), present pain intensity (PPI), and the visual analogue scale (VAS), Gagliese and Katz (2003) examined the relationship between the patients' age and pain intensity based on the self-reported pain scales and patient-controlled analgesia (PCA) opioid intake among the younger male surgical patients (n=95; mean age = 56.4 +/-5.8 years) and the older male surgical patients (n=105; mean age = 66.8 +/-2.7 years) who had undergone a radical prostatectomy. Based on the research findings, the authors observed that less opioid was administered on the second day as compared to the first day after the operation was conducted except for the fact that younger men are more likely to self-administer opioid as compared to older men (Gagliese and Katz, 2003).

Ene et al. (2008) conducted a self-reported study on the pain intensity of 155 men who underwent a radical prostatectomy. Using the Pitmans' test, Ene et al. (2008) measured the

correlation between potential pain predictors and the postoperative pain experiences during three postoperative days. Aside from experiencing preoperative depression (VAS > 70 mm), the research findings of Ene et al. (2008) revealed that younger patients report higher pain levels (VAS > 30 mm). Similar to the research findings of Ip et al. (2009) and Gagliese and Katz (2003), Ene et al. (2008) also supported the idea that age is a useful predictor when assessing postoperative pain. Gagliese and Katz (2003) mentioned that the age differences in pain were highly dependent on the type of pain scale used in the sense that the use of both McGill pain questionnaire (MPQ), present pain intensity (PPI) shows that younger men have higher pain scale scores as compared to older men. On the contrary, Gagliese and Katz (2003) found no difference in the use of visual analogue scale (VAS). Due to lack of sensitivity, the authors strongly suggest that it is not possible to use visual analogue scale when it comes to detecting the relationship between age and postoperative pain. Since the process of determining the significance of age differences and pain amongst the postoperative patients is not possible with the use of visual analogue scale (VAS), surgical nurses should make use of verbal description of pain qualities when determining the relationship between age and postoperative pain.

Despite this evidence other studies which have been carried out concerning age and postoperative pain have not shown analogous results. For instance although Haely et al. (1998) showed a positive correlation between age and postoperative pain similar research which has been carried out by both Rudin et al. (2008) and DeCosmo et al. (2008) showed no correlation at all between age and postoperative pain. It is worth noting that the relatively low sample size of the last two studies (47 and 82, respectively) meant that the P-value was too low to accurately detect any significant difference between age and postoperative pain level. Despite this these studies do still represent a clear indication that the concept of age and postoperative pain remains inherently complex and difficult to quantify with complete certainty. As a result it should not be taken for granted from the nursing community that younger people in postoperative situations will always have higher pain thresholds when compared with older patients.

2.4.4 Influencing Factors in Responses to Postoperative Pain – Culture, Race and Ethnicity

Cultural values influence postoperative pain and are an important consideration for research which looks a pain assessment from both the viewpoint of the nurse and the patients

themselves. In the context of this research culture refers to the behavioural and attitudinal norms that shape an individual's beliefs and behaviours, including health seeking behaviours or receptivity to pain relief (Lasch, 2002; International Association for the Study of Pain, 1994). What is interesting in this regard is that research exploring the effects of culture on pain perception often show conflicting results. As a result many clinical experts opine that some cultures have higher pain thresholds and can tolerate more pain when compared to some other cultures — as pain can be associated with suffering (Lasch, 2002; White et al., 2010). It would be important to note, however, that this may represent an overly simplistic view of the cultural differences as people from different cultures may have different reactions to pain and this does not necessarily mean that they have a higher or lower pain threshold.

This can be demonstrated through cultural differences guide each person as to how they will verbally express their pain using either English or their own native languages (Lasch, 2002). This is an important consideration in research which looks at postoperative pain as often language gaps can present problems for patients in that they are not able to accurately verbalise their pain to others. For this reason, cultural factors may contribute and influence to accuracy of pain assessment and the effectiveness of pain management. At the moment, however, there is insufficient evidence to prove any significant correlation between known cultural factors and the ability of patients to describe their pain. This apparent knowledge gap will be explored in this research as different people from different cultures may react differently to pain, and is can often become difficult for surgical nurses to determine the real pain intensity and severity. For example, there is definitely a research opportunity in studying the link between postoperative patients' behaviour and how they will perceive postoperative pain.

Ethnicity refers to the group of people who share a common social background, culture, tradition or ancestral origins that provide a sense of identity and are maintained over generations (Lasch, 2002). As a result it is considered that ethnicity could possibly affect how each patient will perceive postoperative pain. Lasch (2002) conducted a systematic review on the relationship between ethnicity and pain and found evidence to suggest that ethnic minorities such as African Americans and Asians are at risk for inadequate postoperative pain relief compared to Caucasians in the US (Lasch, 2002). This evidence suggests that the reasons for this include lack of nurse's empathy towards patients with different ethnic

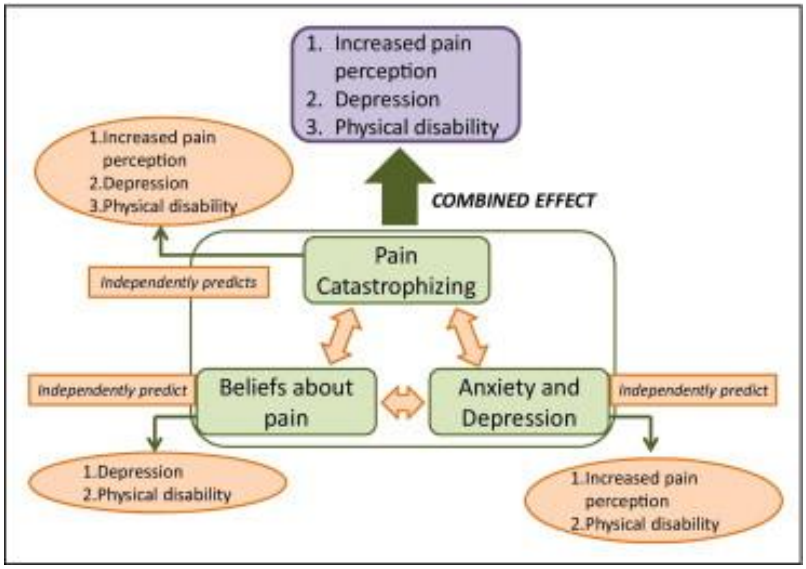
backgrounds, patient's stigma, outright patient discrimination, and differences in nurses' perception of the patient's pain intensity (Lasch, 2002).

In agreement with Lasch (2002), Lavernia et al. (2011) conducted a retrospective review of data in 1,749 patients following total joint arthroplasty. The review of Lavernia et al. (2011) showed that patients with ethnic backgrounds such as the African Americans and Asians have the worst outcomes and worst pain scores as compared to Caucasian patients. Another study by Kamath and O'Connor (2010) also supported the research findings of Lavernia et al. (2011). Kamath and O'Connor (2010) discussed the differences in postoperative pain relief and function after knee surgery. The authors mentioned that the African Americans receive inadequate relief from postoperative pain because of a number of reasons such as language barriers and the lack of understanding of the nurse in assessing pain in patients with ethnic background (Kamath and O'Connor, 2010).

2.4.5 Influencing Factors in Responses to Postoperative Pain – Psychological Issues

Besides the different significant factors that contribute to the postoperative pain experience, recent evidence suggests the strongest psychological factor which is associated with pain experiences amongst patients is "pain catastrophising" (as discussed in Khan et al., 2011 and Sullivan, 2009). Pain catastrophising is defined as "an exaggerated negative mental state brought about during actual or anticipated painful experience" (Sullivan, 2009, p.10). It involves the patient dramatising existing or anticipated pain to the extent that it has an impact on their experience of pain. This is shown in Figure 2 below which outlines the association of catastrophising with other psychological factors and how these relate to pain and pain perception n patients.

Figure 2.2: Association of catastrophising with other psychological factors and their effects (from Khan et al., 2011)



With regard to catastrophising pain in postoperative surgical patients, Khan et al. (2011) conducted a systematic review of all literature found on Medline, Mbase and Psychinfo. The main aim of Khan et al's review was to "describe the concept of pain catastrophising, its association with post-surgical pain, and its potential role in the management of post-surgical pain and post-surgical quality of life" (Khat et al., 2011, p.122). Catastrophising can be measured using either the Coping Strategies Questionnaire (CSQ) or the Pain Catastrophizing Scale (PCS). Since pain catastrophising is associated with other psychological factors such as beliefs about pain, anxiety and depression, the presence of catastrophising can increase the patients' perception of pain (Khan et al., 2011). Indeed research has suggested that in many worst case scenarios this can lead to depression and physical disability when left unmanaged (Khan et al., 2011). According to Khan et al. (2011), surgery in itself is a key painful event that can activate pain catastrophising. This systematic review by Khan et al. (2011) reveals that high pain catastrophising is associated with increased postoperative pain severity, which is attributed to the patients' greater attention to pain and bodily sensation.

To create unbiased, accurate and meaningful research work on factors influencing postoperative pain, the authors made a systematic search and critical review of medical literature surrounding the research question and conducted explicit methods to systematically

search, critically appraise, and analyse a comprehensive literature (Khan et al., 2011). In addressing these issues the review undertaken by Khan et al. (2011) also posits that high pain catastrophising plays a role in the progression from acute postoperative pain to chronic post-surgical pain. This suggests that acute postoperative pain is a strong predictor of chronic post-surgical pain, hence, inadequate postoperative pain relief concomitantly develops chronic post-surgical pain (Katz and Seltzer, 2009; Khan et al., 2011). Pain catastrophising is also strongly affected by the patients' own beliefs about pain and anxiety and depression (Katz and Seltzer, 2009; Khan et al., 2011). Based on Katz and Seltzer's (2009) expert review, the intensity of postoperative pain is considered as a consistent risk factor for chronic post-surgical pain. Lastly, Khan et al. (2011) reveals that high pain catastrophising predicts a poor quality of life post-surgery such as emotional dysfunction, increased likelihood of unemployment, distress and low social support. This can be a very important consideration when looking at pain management and pain assessment in postoperative situations in underdeveloped and developing regions, or areas of high social and economic deprivation as the support structures to try and combat pain catastrophising may not be in place. As compared to other systematic review of literature presented in this paper, the study of Khan et al. (2011) provides a strong systematic review of evidence.

2.4.6 Summary on Factors that May Affect Patients' Response to Postoperative Pain

It is important to note that not all factors presented on this study can or will affect how patients respond to postoperative pain. For example looking at the type of surgery which is undertaken researchers can see from the different studies undertaken that the type of surgery which has taken place does not necessarily influence how the patients will perceive postoperative pain. This is supported by the research of Ip et al. (2009) who considers that gender is not a key factor that affects how the patients will respond to postoperative pain. Instead other factors such as age, culture and ethnicity and psychological issues like pain catastrophising are among the factors that could somehow affect how the patients perceive postoperative pain (as supported by the systematic review conducted by Khan et al., 2011). Due to conflicting research study results with regard to the significance of culture and ethnicity on how the patients perceive postoperative pain the influence of these areas subject to further study and will be a key aspect of this research. As a result it is deduced that the relationship between postoperative pain and any of these social factors should be further investigated.

CHAPTER 3: METHODOLOGY

3.1 Introduction and Overview of Approach

This research utilised a grounded theory approach based on inductive research and elements of symbolic interactionism to address the main aims and objectives of this work and establish how surgical nurses dealing with postoperative patients in Kuwait assess postoperative pain. The grounded theory approach was considered most suitable for this research as it represents an inductive process through which theories can be proposed and assessed in relation to specific research criteria. The grounded theory method adopted focused on a constructionist grounded theory approach. This was selected as it remains one of the most popular methods of research in the disciplines of nursing and psychology due to its base in emphasising a relationship between a research and a participant (Mills et al., 2006). Grounded theory was founded in the methods of Glaser and Strauss (1965, 1967) who conducted research which focused on the study of dying patients in hospitals in the United States. Glaser and Strauss' research explored analytic ideas in long conversation and through observations constructed and developed a systematic methodological approach that social scientists could adopt for studying many other sociological topics (Glaser and Strauss, 1965; 1967).

Due to its successful historical application in similar research it was considered that the grounded theory approach provided the most suitable methodological framework for this research - particularly due to its explanatory power (Mills et al., 2006). The grounded theory approach also includes elements of symbolic interactionism which looks at understanding how human beings interpret and define each other's actions, to ensure that the aims of the research (in establishing how surgical nurses assess postoperative pain) can be measured within theories which allow for interpretations of human behaviour. Addressing the concept of symbolic interactionism in the methodology established the potential issues which may have arisen during interviews when the participants and interviewer held different beliefs or values as well as allowing for the identification of the meanings that patients placed on their experience of pain. This research was inclusive of both primary and secondary data sets, with the primary data obtained through the use of semi-structured research methods. The methods and sampling techniques used for these interviews are detailed within this method as well as methods for data collation and evaluation.

Analysis of the primary data was undertaken through qualitative assessments, supported by a literature review which outlined the main concepts and theories relating to postoperative pain in nursing. The primary data obtained was supported by a method inclusive of symbolic interactionism to provide a framework which acknowledges that different people place different meanings on things and hold different values (Blumer, 1969). Symbolic interactionism impacts on how individuals react to events or situations, and is constantly evolving and was considered as an important feature of the methodology for this research and the resulting data consolidation and assessment. In general terms this research adopted a grounded theory approach to elucidate the experiences of Kuwaiti nurses in assessing postoperative pain amongst patients in a surgical ward. This chapter will explain and provide justification for this approach as well as exploring symbolic interactionism as the theoretical perspective of grounded theory methodology. The succeeding sections of this chapter discuss the grounded theory methodology and how this will be used in exploring the experiences of Kuwaiti nurses and their patients on postoperative pain assessment. This will be achieved through the establishment of epistemological and ontological positions, an outline how these relate to the theoretical framework of the grounded theory method adopted and through an established method for data sampling and analysis.

3.2 Grounded Theory Methodology

Grounded theory has been defined as a 'methodology that seeks to construct theory about issues of importance in people's lives' (Mills et al., 2006, p.2). This is achieved through data collection and collation which operates within an inductive framework – with the research having no preconceived ideas or hypothesis to either prove or disprove through the work (Morse, 2001). One of the main defining components of the grounded theory approach suggested by the Glaser-Strauss methods is the idea of the simultaneous involvement of both data collection and analysis and the construction of analytic codes and categories from the data obtained rather than from preconceived logically deduced hypotheses. This allows for the use of a constant comparative method, which involves making comparisons at each stage of the analysis (Glaser, 2005). Looking to advance theory development during each step of the data collection and analysis helps to address issues such as data saturation, and can be achieved by introducing memo-writing methods to help elaborate categories with specific reference to their properties. This form of memo-writing is also a tool through which

relationships between categories can be defined and any gaps can be identified (Charmaz, 2006).

Undertaking sampling which is aimed at theory construction rather than sampling which looks to ensure population representativeness is another defining component of the grounded theory approach, and is often accompanied by a literature review which is conducted after independent analysis has been developed (Charmaz, 2006). These key features of the grounded theory approach will be addressed through the methodology to ensure that the applicability of these perceived benefits to the overall research aims of this particular study are outlined and assessed. In addressing postoperative pain in patients in Kuwait it was considered that the grounded theory methodology represented the most appropriate research method as there were no established ideas to test, with the research instead focusing on addressing the issues of importance which emerged from recipients during the interview process – with associated data analysed by constant comparison (as outlined in the methodology of Mills et al., 2006). This grounded theory approach also helps to address the key aims and objectives relating to the knowledge and perceptions of Kuwaiti nurses on pain assessment and the experiences of patients in surgical wards.

3.2.1 Ontological Perspective and Epistemological Influence

The main aim of a grounded theory methodology is to generate theories from data that will emerge in the study and, as such, this was considered to represent an appropriate research tool for this work. This has been approached with a relativist ontological position (as discussed in Guba and Lincoln, 1994), which outlines that concepts such as truth, rationality, good and reality itself must be understood 'as relative to a specific conceptual scheme, theoretical framework, paradigm, form of life, society or culture' (Bernstein, 1983, p.8). In essence, this means that the ontological approach to this research will acknowledge that there may be multiple individual realities amongst the patients and nurses who have participated in this study, and that these realities are influenced by context. This needs to be considered throughout the interview process and during the analysis of the data obtained. Adopting a constructionist approach founded in grounded theory is desirable in many aspects of sociological research because it allows for a discovered reality to arise from the 'interactive process and its temporal, cultural and structural contexts' (Charmaz, 2000, p.524). During the interview process and subsequent assessments of the interview transcripts, there was

consideration that these contexts should be referenced during the analysis stage and when discussions and conclusions were drawn.

In addition to a relativist approach, the grounded theory method which has been determined as most appropriate for this research, utilised constructivism as the main methodological imperative. Again, related to the notion of relativism the constructionist approach to research acknowledges that individuals do not quickly or readily reach their own conclusions or resolutions about the nature of truth and reality, but are instead all influenced by history and culture 'which in turn shape our view of the world, the forces of creation, and the meaning of truth' (Mills et al., 2006, p.2). This represents a research paradigm which ensures that notions of an objective reality are ignored and that the realities of those taking part in this study, throughout both the primary and secondary data obtained, are social constructions which are formed on an individual basis (Guba and Lincoln, 1989; Guba and Lincoln, 1994; Mills et al., 2006). It was important to ensure that each individual was treated as a discreet respondent rather than trying to group together different ideas and use these to 'prove' a particular point. Instead, the transcripts of the interviews were examined in their entirety on an individual basis, before being refined through a coding exercise. This ensured that the researcher was able to understand the context of certain discussion points and consider how these may have influenced certain responses.

Epistemologically, the constructionist approach can help to emphasise the subjective relationship between the researcher and the participants in any study and help to understand and establish a co-construction of meaning (Hayes and Oppenheim, 1997; Mills et al., 2006). This is important in this research as it established common understanding between patients, nurses and the researcher of notions and concepts such as pain, acute pain and pain assessment to ensure that interpretations based on these concepts were consistent across all respondents. This was important because the main aims of this study involve exploring the levels of pain experienced during postoperative care and how surgical nurses are able to diagnose and manage acute pain among the postoperative patients. The constructionist approach is, therefore, a theoretical approach which emphasises practices and actions and rather than explaining reality, social constructionism acknowledges that there are multiple realities located in particular positions, perspectives and experiences (Charmaz, 2006).

3.2.2 Inductive Research Methods and Grounded Theory

To gather a wide-range of personal experiences concerning pain management, the grounded theory methodology is beneficial to this research because it also employs elements of inductive reasoning (Milliken and Schreiber, 2001). This means that the primary data obtained during this research is inclusive of information gathered from a variety of different sources of personal and professional experiences for both surgical nurses and postoperative patients. These differences were anticipated before the study was undertaken due to the nature of postoperative care and the range of different scenarios of pain which can manifest in postoperative situations – and were patterns which emerged as the interviews took place. This is evidenced by the significant variations in reports of postoperative pain (and acute pain in particular) through differences in intensity, duration, and the quality of the recovery period - even in case studies which follow the same procedure (Macintyre et al., 2008). Acute pain through this research is considered against the definition by Carpenito-Moyet (2008) who describes acute pain as 'the state in which a person experiences and reports the presence of severe discomfort of an uncomfortable sensation lasting from 1 second to less than 6 months' (Carpentio-Moyet 2008, p.125).

The Grounded Theory methodology is viewed as inductive process where theories are proposed as a response to a research phenomenon (Coughlan et al., 2007). Once data are available this data is then coded and categorised to allow for analysis and interpretations to be made. Utilising the categories obtained call allow for themes to be generated and used to explain the research phenomenon. This allowed for more effective analysis against the primary aims and objectives of the research, but also facilitated assessments which were based on new evidence and lines of enquiry which emerged through data analysis. In this research, inductive reasoning involves using information from the experiences of both patients and nurses and generating a theory, and through this research the theories generated have enabled a better understanding about how surgical nurses currently assess postoperative patients and their experiences of acute pain and relating this research method to those key aims and objectives.

3.3 Symbolic Interactionism and Social Interactionism

It is also important to note that the concept of grounded theory is underpinned by aspects of symbolic interactionism (Coughlan et al., 2007), and this concept will also be explored within

this research methodology. Symbolic interactionism is a theoretical perspective that looks to establish theories to better understand how human beings interpret and define each other's actions. It was first outlined by George Meade in 1934 when discussing elements of social interactionism - itself an important theoretic feature of this work. In its simplest form social interactionism and by proxy symbolic interactionism has come to represent a theory which suggests that individuals and groups act based on the symbolic meaning that they find within given situations (Meade, 1934). This is an important concept in this particular work because Meade's theory suggests that the 'self is active' and is 'always reflexively processing what's going on…in an ongoing internal conversation with ourselves, using the self to monitor and evaluate the self' (Meade, 1934, p.137). As a result, if an individual is engaged in the theory of social interactionism this would be a key characteristic of the participants who have been part of this study. This is essentially because during the interviews, even when the participants are looking back on an experience, they are also anticipating what they may say and are simultaneously processing what others are saying or communicating (Dillon, 2010).

Proponents of symbolic interactionism are essentially determining that social participants in any social situation are 'constantly negotiating a shared definition of the situation; taking one another's viewpoints into account; an interpreting one another's behaviour as they imaginatively construct possible lines of interaction before selecting lines of action for implementation' (Vilar and Inglesa, 2000, p.4). This perspective was first developed more than 40 years ago through the work of Blumer (1969) who suggested that the way individuals react to people, places, things or objects is influenced by the meaning these individuals place on things or people. As a result, past experiences, societal norms, culture and the environment all influence how people attribute 'meanings' on others (Blumer, 1969; Vilar and Inglesa, 2000). This is an important element of this research as issues of culture and societal norms will be an important feature of data analysis when addressing both the patient's and nurses' opinions in a Kuwaiti hospital. Utilising the symbolic interactionist perspective can, therefore, enable researchers to analyse how nurses find meanings on the pain of their patients and relate these to the way they conduct pain assessment. This is an important element of the work of Blumer (1969) who argues that the meanings people place on objects or persons continuously evolve and are influenced by how people interpret these meanings. Utilising and understanding the symbolic interactionism approach in this research will help to establish how nurses understand the pain of their patients and also how they assess this pain.

One of the key elements of the symbolic interactionist perspective when applied to the grounded theory methodology is that it is reliant on 'symbols' and the meanings of these symbols for the participants. Aldiabat and Le Navenec (2011) explain that the symbolic interactionist perspective assumes that human beings exist in a symbolic world where individuals attach meanings to the persons or objects they see. Since these meanings are learned, one's prior experiences play an integral role in deciphering the meanings of symbols or objects or in conferring meanings to the symbols or objects one sees. Aldiabat and Le Navenec (2011) add that the way humans react to objects or other people would be dependent on the meaning they place on their peers or objects. An important concept of symbolic interactionism is the development of the self as social construct. This is because the individuals' perception of how others view them would also add to their self-perception.

McCann and Clark (2003) have also introduced the concept of negotiated meaning in symbolic interactionism and this is again important in grounded theory methodologies. This is particularly applicable in this research as it involves interviews - situations in which there is a high amount of interaction which is contextual and negotiated. As detailed in Charmaz (2006) during the interview process 'whether participants recount their concerns without interruption or researchers request specific information, the result is a construction or reconstruction of a reality' (Charmaz, 2006, p.27). In their 2003 work, McCann and Clark explain that social constructs influence how individuals perceive the meaning of symbols and link this to the notion of negotiated meaning. Utilising the concept of social interactionism in this work allowed for the experiences of the nurse participants in assessing pain to be explored through their own lived experiences. McCann and Clark (2003) also argued that human relationships are mediated by the negotiated meaning of symbols.

It is then likely that participants in a study would use the concept of the self and role taking when they are placed in a specific situation. The individual's interpretation of the self would also reflect on how he or she interprets the perceptions of others about herself or himself (McCann and Clark, 2003). This theoretical perspective is used in this study as this compliments the study's main aim and objectives. Specifically, this study aims to explore how nurses assess the patient's level of pain during postoperative care. In this regard, symbolic interactionism has helped to understand how nurses place meanings on their interactions with patients. Similarly, this perspective has also provided a view on how nurses

change the way they give meaning to their interactions and how these meanings are interpreted. Since this study also aims to explore the patients' perception of postoperative pain, symbolic interactionism has also helped in identifying the meanings that patients place in their experience of pain.

3.4 Grounded Theory Models

There are many models which outline grounded theory methodologies, however three of the most commonly referred to models in social research are Charmaz's (2006) model; a model introduced by Corbin and Strauss in 2008 (which builds on their earlier 1996 model); and the Glaser model (Glaser, 2005). Although the grounded theory approach continues to be refined and re-modelled, each new model retains the key values of grounded theory - that it allows for research to generate a theory that 'accounts for a pattern of behaviour that is relevant and problematic for those involved' (Glaser, 2005, p.1). Adhering to this general principle ensures that the research undertaken does not become overly descriptive or seeks to verify existing hypotheses, but that it provides a framework through which the key aims and objectives of this research can be addressed.

3.4.1 Overview of Charmaz's 2006 Grounded Theory Model

Charmaz's 2006 grounded theory model is one of the most commonly used methods in grounded theory. It was developed on the foundations of the work of both Glaser (2005) and Corbin and Strauss (1996) and has become one of the leading frameworks for constructivist grounded theory methods. Under Charmaz's model there is increased emphasis on the research question and further focus on elements of reflexivity (Charmaz, 2006). Under this research method, the rigid methods that usually accompany data analysis and interpretation are not followed allowing the researcher more freedom in data analysis and interpretation and allows the researcher to 'follow up on an interesting idea in whatever way they devise' (Charmaz, 2006, p.3). While Charmaz's 2006 model focuses on reflexivity and the research question, it has some weaknesses in addressing the arguments and thoughts of the participants.

One of the weaknesses of Charmaz's model is that in many instances there is too much focus on participants and their perceptions and how they place meanings on what they have experienced that they are treated as the ultimate authority in the research process. While this

is a key strength in many aspects of qualitative research (as outlined in Glaser and Strauss, 1967; Bryant and Charmaz and Charmaz, 2006) it was considered that this could potentially weaken this particular research project by introducing elements of bias during data interpretation - particularly in scenarios where the perceptions of the participants are viewed as valid and the only authority. In addition Charmaz's methodology which includes extensive reference to telling multiple stories from the participants is not founded in the basic principle of grounded theory which looks at explaining conceptually and ongoing behaviour in an attempt to resolve an important concern (Breckenridge, 2012).

3.4.2 Overview of Glaser's 2005 Grounded Theory Model

Another version of the grounded theory model is Glaser's model of grounded theory methodology proposed in 2005. This model is also known as the classic grounded theory model where the main aim of the research process is to build theories. Glaser's model focuses on establishing core categories in an effort to ensure that the grounded theory method does not 'drift in relevancy and workability' (Glaser, 2005, p.1). This approach, therefore, determines that core categories need to be selected by the researcher, differing to other forms of grounded theory methods which suggest that categorisation occurs more organically during data assessment (Glaser, 2005; Charmaz, 2006). It is important to note, however, that under this model, while there is a focus on the participants, the researcher's creativity is also highlighted during data analysis and a systematic approach to data analysis is not rigidly followed. Thus the focus of the research must emerge 'on its own to do justice to the data, while accounting for significant variation in problematic behaviour' (Glaser, 2005, p.3).

In a similar style to Strauss and Corbin's model (outlined below), there is difficulty in detaching one's perceptions and experiences when analysing and interpreting data, however, this can be beneficial when attempting to categorise and interpret the data obtained. For this work, the previous experience of the researcher in nursing helped to ensure data assessment and the extraction of information was more efficient and also that negotiated meanings could be established more readily in data collection and considered during analysis and interpretation. In accordance with Glaser's 2005 method sorting remains an inherently creative activity and considers that 'sorting by hand' is the most practical form of categorisation (Glaser, 2005). This may be one of the significant limitations of the Glaser model and other forms of categorising from memo sorting were considered in this work -

such as the use of technology props and computer programmes (as suggested in Bryant and Charmaz, 2007). Utilising computer programmes to help with the sorting aspect can improve the time taken to complete tasks and also provide an auditable trail of decision-making (McLellan et al., 2003).

3.4.3 Overview of Strauss and Corbin's 2008 Grounded Theory Model

Strauss and Corbin's 2008 model on grounded theory builds on their early work in 1996 and is again underpinned by a relativist position and the belief that the 'researcher constructs theory as an outcome of their interpretation of the participants' stories' (Mills et al., 2006, p.7). In this model, transcripts from nurse and patient interviews, field notes and memos are systematically analysed in order to generate a theory, with categories and codes used during coding stages throughout the analytic process. Corbin and Strauss (2008) explain that there are three important elements in GT methodology. These are coding of the transcripts, performing theoretical sampling to better understand the emerging theory and constant comparison between the emerging theory, research context and phenomenon. There is criticism of Corbin and Strauss' method, and in particular the fact that this version of grounded theory favours new technical procedures rather than the re-emphasis of the comparative methods that distinguished earlier works (Charmaz, 2006). Indeed, some research suggests that these procedures found in Corbin and Strauss would force data into preconceived categories in contradiction of one of the fundamental tenets of grounded theory (Charmaz, 2006). More robust technical frameworks for coding and theoretical sampling were established in this work to strengthen any theory that emerges from the data analysis. This involved using relatively simple computer programmes such as Excel and Word to consolidate data to help sort and categorise data more readily.

It should be noted that in Corbin and Strauss's (2008) grounded theory model utilise a systematic approach during collection and analysis of data. Although an apparent weakness of this model lies on the difficulty of a researcher to remove one's own perceptions and biases during data interpretation and analysis, this could also be considered a strength through this study due to the use of qualitative research methods (as discussed in Bryant and Charmaz, 2007; Corbin and Strauss, 2008). Throughout this research efforts were made to ensure that the data obtained was interpreted objectively and with no reference to personal perceptions and experiences from the researcher in contrast to the respondents, whose

perceptions and experiences were recorded using memos This was in accordance with the method of Corbin and Strauss in attempting to remove any pre-conceived theories from data assessment which may have otherwise influenced data analysis and interpretation (Corbin and Strauss, 2008). This method was established because prior experience and knowledge can, in some instances, become a hindrance to the researcher in that they may be influenced by their prior knowledge and miss out and put aside some of the valuable insights from the participants themselves (Corbin and Strauss, 2008; Thomson, 2011).

3.5 Adopted Grounded Theory Model

Although elements of the three models discussed were incorporated into this work, the study focused on the models espoused by Strauss and Corbin (2008) and Charmaz (2006). This grounded theory approach was used to generate a theory on Kuwaiti nurses' experiences in assessing pain amongst their patients recovering from minor surgical operations and to answer the key aims and objectives of this research. These were considered to be the most appropriate grounded theory methods due to the elements of these models as detailed below. This is firstly because this would allow for the development of a research method which included the coding of transcripts and also the notion of theoretical sampling. This allowed for coding to be in place to provide a robust framework for data analysis, and the inclusion of a system which outlined participant selection (for use in conjunction with the semi-structured interviews with postoperative patients and surgical nurses). In addition to the benefits of establishing a framework, utilising elements of these three research methods also allowed for constant comparison between the emerging theories, research contexts and phenomenon. As no preconceived hypotheses were established, this research attempted to analysis throughout the study, and required a methodology that would facilitate ongoing theory building. This approach also allowed for the inclusion of technical procedures as discussed in Corbin and Strauss (2008), so that some elements of computer sorting and coding could be introduced.

3.6 Categorisation and Coding - Data Collation and Assessment

Under the grounded theory methodology interviews need to be analysed systematically through the use of extensive coding to establish early links between the empirical world and theoretical ideas (Charmaz, 2001; 2006). This section will look at two key techniques in this regard - data coding and data categorisation.

3.6.1 Memoing and Data Analysis

Under the grounded theory methodology, data is assessed early in the research process and is separated, sorted and synthesised through qualitative coding. The term coding in this scenario refers to the attachment of labels to segments of data that depict what each segment is about. Essentially coding 'distills data, sorts them, and gives us a handle for making comparisons with other segments of data' (Charmaz, 2006, p.3). While there are differences in the three models, all proponents of these models agree that memoing will help support the coding of data for analysis. Memos are essentials preliminary analytical notes about the codes and comparisons and any other ideas about the data which may occur. They are an important element of theoretical sampling as writing memos can allow the researcher to 'map out possible sources to sample theoretically, while at the same time creating an important audit trail of the decision-making process for later use' (Birks and Mills, 2011, p.11). Through the analysis and comparison of data and the continued writing of memos, ideas can be defined that best fit and interpret the data as tentative analytic categories (Charmaz, 2006). Indeed, the use of memoing can help in the analysis of transcripts, and is inclusive of elements of inductive reasoning which can allow for the generation of themes within the work (as detailed in Corbin and Strauss, 2008). In this research the use of memoing helped when it became apparent that the patient interviews were providing limited and replicated data more in-depth interviews were constructed with the nurses who were participating in the study.

In their most basic application, memos can also help to support the transcripts and data from the interviews. Symbolic interactionism plays a crucial role during the memoing and data analysis stages as this research utilising social constructs in interpreting data. These social constructs are social mechanisms or categories which are continually developed by society and relate to the perceptions and values that individuals and groups hold through cultural and social practices. Through this research utilising analytical categories and the identification of the relationships between them helped to provide a more robust conceptual handle on the studied experience - helping not only to develop levels of abstraction directly from the data but also to gather additional data to check and refine our emerging analytic categories (Charmaz, 2006). In order to keep the participants voice and meaning present in the final theoretical outcome (including patients and nurses ideas of pain, pain treatment and the concept of care) these memos included raw data both from the onset of the study and through the research as these memos were refined and become more complex and analytical (as

outlined in Mills et al., 2006 and Charmaz, 2001). Issues of pain and care are often subjective and hold different meanings to different people (in terms of issues such as pain thresholds), so memos helped to contextualise some of the issues raised during the interviews, allowing for more assessments as to how passionately and dispassionately certain points or issues are raised.

3.6.2 Coding in Grounded Theory Methods

Utilising elements of thematic analysis allows for specific coding categories to be assessed through patterns in the data obtained and is considered to be a valid research tool when reviewing semi-structured interviews and can facilitate the construction of key thematic ideas (Marks and Yardley, 2012; Casey, 2012). Coding is perhaps the pivotal link between data collection and developing an emergent theory or emergent theories to explain this data (Charmaz, 2006). Coding allows a researcher to define what is happening within the data and to try and begin to disseminate it to find discussion points and is founded and developed in grounded theory methods through two main phases (as outlined in Charmaz, 2006, p.46):

- An initial phase involving naming each word, line or segment of data followed by;
- A focused, selective phase that uses the most significant or frequent initial codes to sort, synthesis, integrate and organise large amounts of data.

The initial stages of coding a variety of theoretical directions can be considered, and it is not until the selected phase that coding looks to develop the most salient categories across the large batches of data obtained. Adopting this approach through the grounded theory research method allowed for the initial coding stage to allow for an exploration of a range of theoretical possibilities that could be identified and discerned within the data (a benefit of the grounded theory approach discussed in Charmaz, 2006). This initial coding stage sticks closely to the data, but allows for open assessments of the data to be undertaken. Essentially, therefore, theoretical integration begins during focused coding and then proceeds through all of the other analytical steps (Charmaz, 2006). It is important in the development of the method coding that the language of the codes were considered as well as acknowledging that culture also has an important role in how data is analysed.

The fundamental logic of grounded theory coding differs from quantitative logic because it is not determined by only preconceived categories or codes to the data (Charmaz, 2006).

Instead grounded theory approaches the coding stage more qualitatively by ensuring that codes emerge only when the data is analysed and the researcher is able to then define some of the meanings within it (Charmaz, 2006). This is often referred to as active coding as it reflects a method whereby the researchers is able to engage and interact with the data multiple times and approach each assessment with new questions - allowing for many unforeseen research ideas or theories or even new research questions to be found. The model of Glaser (2005) is not used in this study for the lack of a systematic approach in analysing transcripts. In addition, reliance on the researcher's creativity (a key theme of the Glaser model) might also compromise the findings of the study since it is difficult to establish the credibility and trustworthiness of the findings. Utilising the Glaser approach would also make it very problematic for other researchers to utilise the findings of the study effectively since replication of the methods would be impossible (Bryant and Charmaz, 2007). As a result, if the Glaser model (2005) was adopted it was anticipated that the rigour of the study would be compromised due to the absence of a systematic approach in analysing and interpreting data. In conjunction with a relativist ontological position can also help to establish more rigour and credibility as it will reference the realities of those respondents taking part in the interviews through establishing the context under which they are being interviewed and their own cultural, temporal and structural contexts (Charmaz, 2000).

In contrast to the Glaser model, the model of grounded theory outlined by Corbin and Strauss (2008) presents a systematic approach in data analysis that would allow researchers to compare the codes generated from the transcripts. Categories and themes that would emerge from the study would also be compared constantly to verify relationships between the codes, categories and themes. In this model, open coding of the transcripts would be done. This would also determine whether similar codes are generated across the transcripts. Following open coding, axial and selective coding would be done to determine the codes that would be used to generate categories and themes. In this work using this model has helped in understanding how nurses in Kuwaiti healthcare settings assess the pain of patients recuperating following surgical procedures. The codes, categories and themes that are generated from the nurses and patients' transcripts are then used to explore the experiences of both groups to generate theories on how pain assessment is done in Kuwaiti's hospital settings.

3.6.3 – Summary of the Grounded Theory Model

Overall, the research adopted a grounded theory method constructed through the process of interviewing both patients and nurses who had experience of postoperative environments. The grounded theory approach through the use of interviews and analysis of interview transcripts allowed for theories to be constructed throughout the work, rather than an approach that would require a hypothesis to be constructed and then tested through the research. This constructionist approach ensured that the interviews could be examined without the need for established criteria to try and fit different answers into, but that these could be developed throughout the work to allow for different theories to grow and be examined and analysed in turn. This incorporated elements of relativist grounded theory methods which considered that each individual will hold different opinions and values and that these will have been constructed throughout that individual's life. As a result, reference to ontological perspectives ensured that the researcher acknowledged that each individual interviewed would have a different version of reality and that this will always be influenced by that individuals perspective, values and the context in which the interviews are undertaken. Ensuring that this was considered throughout the analytical process was part of the constructionist approach to grounded theory methods to try and help ensure that the context of the interviews and responses were considered when analysing the data.

As this was achieved through an interview-based approach, it was also important to consider symbolic interactionism and its relationship with grounded theory methods. This was considered during the interviews and when analysing the data which had been obtained. During the interviews, understanding the concept of symbolic interactionism helped in understanding that respondents may be continually revaluating their responses and that often the researcher needed to reaffirm certain discussion points or ensure that the respondent felt at ease and could offer honest answers which would not have any future negative impacts for them. The constructionist approach was one of the main features of the grounded theory approach adopted in this thesis due to its advantage in analysis which needs to consider the context of the discussion taking place and also in emphasising the subjective relationship between the researcher and the respondent. This was important in the context of the discussion because it was important to establish a common understanding in relation to the meanings of different questions and responses. The grounded theory method also facilitates

inductive research methods – adopted in this particular thesis as a means to ensure that a wide variety of responses and opinions could be assessed within the same research project.

3.7 Literature Review Findings and Application to Research Method

The literature review undertaken provided sufficient justification and rationale for this particular study and supported the semi-structured interviews which provided the primary research to the overall study. As the literature review in this study suggests, the patients' cultural background, gender, age, current health status, pain threshold and understanding of the disease process all influence how they perceive pain and their reactions to postoperative pain (Department of Health, 2010). Similarly, the literature review shows that nurses' prior experiences with patients also influence the way they assess the pain levels of their current patients (Woods, 2010). However, all these studies are conducted in Western healthcare settings where patient's pain perceptions might differ with the patient's experiences in Kuwait's healthcare setting. Further, nurses in the western world are trained to conduct comprehensive assessment of postoperative pain (Department of Health, 2010; ANZCA, 2010). This has helped to provide a rationale for the work and also to provide an existing theoretical framework from which the analysis and conclusions of this research could be drawn.

In an ideal scenario a comprehensive assessment of pain in postoperative patients would involve identifying the factors that influence pain perception or the experience of pain amongst patients. These include environmental influences, psychological and physiological factors that influence pain perception (ANZA, 2010). The Department of Health (2010) also stressed that assessment of pain should begin before, during and after surgery. Extension of the care process should also be done until discharge processes to ensure that patients experience pain relief (Department of Health, 2010). While Kuwaiti nurses receive similar training in pain assessment, a study exploring how nurses assess pain amongst their patients have never been done. Since culture plays an important role in Middle East countries on how pain is perceived by patients or how they access healthcare services, it was important to explore the issue of pain assessment using grounded theory methodology so that this could be explored. This issue was a critical aspect of the interview structure and the social and symbolic interactionist themes which were identified in the methodology through grounded theory.

The search and review of literature revealed several themes about postoperative pain assessments in the surgical ward. One of the key themes identified is the defined role and responsibilities of surgical nurses to care for postoperative patients and to assess for postoperative pain based on evidence-based practice (Buckley, 2000; Ubino, 2003; Mahfudh, 2011). Another key theme identified showed links between postoperative pain and different factors such as type of surgery or anaesthesia and age that can influence pain threshold (Manias et al., 2002; Khan et al., 2011). Lastly, it is most important that postoperative pain is managed adequately to avoid transitioning to chronic post-surgical pain that may debilitate patients for life and cause other potential problems (Wood, 2010; Marmo and Fowler, 2010). These findings in the literature review helped when establishing the key research questions which would be addressed through the interview process.

3.8 Population and Sampling Strategy

This research adopted both purposive sampling and theoretical sampling frameworks when conducting the primary research. The purposive sampling strategy outlined the targeted sampling strategy to ensure that interviews were conducted with the most appropriate sample set (i.e. nurses and postoperative patients who have experience in acute pain and acute pain management). This is related to the theoretical sampling procedures which dictate that researchers should choose 'participants who have experienced or are experiencing them phenomenon under study' (Thomson, 2011, p.48).

3.8.1 Purposive Sampling

In accordance with the principle aims of this research, two groups of research participants (surgical nurses and postoperative patients in surgical wards) were invited to participate in a semi-structured interview. Initially, only 10 registered nurses in surgical wards in a Kuwait hospital and the same number of patients in postoperative care will be invited to participate in the study in accordance with a targeted sampling strategy. Standard grounded theory methodology does not indicates a set number of interviewees required for theoretical research, but does detail that the theoretical situation needs to be considered at all times (Thomson, 2011; Strauss and Corbin, 2008). This is in accordance with Strauss and Corbin (2008) who recommend a narrowing of the focus of interviews - best achieved by reducing the number of interviewees. This is supported by the research of Mason (2010) who suggests that a phenomenological study using a sample below 20 participants still allows researchers

the opportunity to produce insightful and robust data sets. In addition, recognition was given to the fact that the sensitivity of the phenomena under study (postoperative care) would also restrict the final sample size (Morse, 2000).

The experience of the researcher was also a critical factor in determining sample size (Thomson, 2011). As the researcher in this case has significant experience of the topic under investigation this also justified a more refined and focused sampling size and the introduction of targeted sampling strategies. It was considered in this research that undertaking interviews with 10 patients and 10 nurses ensured that a more in-depth analysis could be undertaken and that issues throughout the coding and categorising stages could be minimised. It was also important to ensure that the process of selecting participants was an evolving process based on arising patterns, categories and dimensions emerging from the data when conducting grounded theory research (Thomson, 2011). This was conducted within this research method with a targeted sampling programme that sought participants that were anticipated to be able to provide a deeper understanding of the emerging patterns, categories and dimensions of the data (in accordance with Thomson, 2011) - particularly in the case of postoperative patient participants. As a result it was anticipated that the 10 patients and nurses selected for interview would be sufficient in meeting the overall aims and objectives of this research and would allow for a more in-depth assessment of the interviews undertaken.

3.8.2 Theoretical Sampling

The quality of the data produced in the research is affected by sample size in many aspects of social research. To ensure that a limited number of respondents did not diminish the quality of the data many theorists suggest that theoretical sampling is used when using the grounded theory method (Thomson, 2011). Theoretical sampling can be used to focus and feed the constant comparative analysis of the data obtained (Birks and Mills, 2011). Charmaz (2006) emphasises that theoretical sampling in the grounded theory methodology occurs when the researcher will invite new participants to compare the findings of an earlier sample to provide more evidence for theory building through the work. Pertinent to this research was the concept of theoretical sampling as a cumulative process (Strauss and Corbin, 2008), with each interview providing data on which the researcher is able to build. This process was repeated until the researcher was able produce theories about how Kuwaiti nurses assess pain amongst patients in postoperative care. In application to the present study, only 10 nurses

from a Kuwaiti hospital's surgical unit were invited to participate in the study so it was important that theoretical sampling was undertaken to help make strategic decisions about what or who will provide the most information-rich source of data to meet the main aims and objectives of the research (Birks and Mills, 2011).

Within the theoretical sampling framework, ongoing assessment and theory building determined that it would be appropriate to recruit nurses who have experience providing postoperative care to different groups of patients who underwent minor surgery. In addition, the theoretical sampling of additional patients was heavily dependent on the findings of in-depth interviews from the initial sample of patients. Although 10 patients were selected, through the application of the grounded theory and theoretical sampling methods the sample size was reduced. It was also considered that if the findings of the study suggested the need to recruit additional patients or nurses, the researcher would invite additional participants. This is in accordance with Charmaz (2006) who reiterates that constant data analysis and emerging theories will help guide the theoretical sampling. In this study, data analysis occurred simultaneously with the recruitment of additional nurses and patients. The main sampling strategy was to target 10 nurses and 10 patients in accordance with the inclusion and exclusion criteria below. In accordance with the grounded theory approach continuous data analysis was also carried out.

It was considered that this research included elements of cross-sectional study parameters as the data obtained during the interviews was based on observations of a sample, or cross-section of a given population or phenomenon that are made at one point in time (Babbie 2008, pp 111). In this case a cross-section will be taken from the defined socio-demographic outlined in the inclusion and exclusion criteria for the patients and nurses invited to participate in the research. Though this provides easily transferable data, which can be manipulated and evaluated across a variety of research objectives, consideration is also required for the potential draw-backs of this particular research strategy. For example the cross-sectional studies draw conclusions from observations made at a single point in time as the interviews were carried out in a single session. As a result the data obtained is cross-sectional in nature because it is obtained from a study in which all observations for each participant are collected at approximately the same point in time (Bryman et al. 2004). This research method aimed to reduce the impacts of this cross-sectional approach through

grounded theory design by ensuring that the data was continually assessed at analysed. In addition participants were afforded the opportunity to review transcripts of the interview at a later date to ensure that they were happy that the interpretations that were made on their responses were accurate. In addition, provisions were made for patients and nurses willing to compare and check the transcripts and provide feedback through member checking – covered in more detail through this methodology chapter.

3.8.3 Inclusion and Exclusion Criteria

The aim of interviewing the patients and nurses is to understand their perspective and document their experience of postoperative pain providing an opportunity to converse with the participant and generate meaning. This initial sample of participants was able to give information on the topic of pain assessment amongst postoperative patients. Inclusion criteria for registered surgical nurses included at least one-year experience in surgical units and those nurses who had acquired some experience with pain assessment - as established from details obtained by the surgical unit or nurse manager. The type of surgery and recovery period could also have an influence on the experience of pain during postoperative care so this was established during the interview selection process. Adhering to this established inclusion and exclusion criteria allowed the nurse participants to provide in-depth discussion relating to their experiences of providing care for patients in postoperative care who are in pain. To achieve this goal the following inclusion and exclusion criteria were established within the sampling strategy.

Exclusion	
Nurse	Specialists in pain management
	Cannot converse in English
	Less than one year's experience in surgical ward
Patient	Patients who have had major surgery
	Under 18 years of age
	Cannot converse in English

Inclusion	
Nurse	Registered surgical nurses who are currently assigned in the surgical unit in

	Kuwait Hospital
	Have worked at least one year in surgical unit
	Experienced with pain assessment
	Can converse in English
	A mix of female and male
Patient	Have knowledge or experience of postoperative pain
	Patients who have undergone minor surgery and have been deemed ready for discharge
	Can converse in English
	A mix of female and male
	Over 18 years of age

Both males and females were included in this research to allow for gender factors to be considered through the semi-structured interviews – exploring issues such as pain threshold levels, pain intensity, and fear across both genders and also comparisons between genders (building on the research of Brunner, 2009 and Leegarrd et al., 2010). As age is also an influence on pain (Ip et al., 2009), it was considered appropriate to remove age criteria from the sampling strategy – with only reference to those who are over 18 years old. The 18 year minimum was introduced to ensure that ethical frameworks could be followed and the complexities of introducing consent for minors and having appropriate persons present in the interview could be removed. This eliminates some of the issues suggested by Cohen et al. (2007) who have indicated that 'there are other aspects of the problem of informed consent (or refusal) in relation to young, or very young, children (Cohen et al., 2007, p.54). This also helps to achieve informed consent by establishing competence – an implication that 'responsible, mature individuals will make correct decisions if they are given the relevant information' (Cohen et al., 2007, p.52). Through the grounded theory and symbolic interactionist approach, it was important that respondents felt that they could be open and honest in their opinions and it was considered that having a parent or adult present during interviews of children may prevent this – with some research into research methodologies suggesting that in some cases children may say anything rather than nothing (so may not necessarily be accurate or truthful (Cohen et al., 2007, p.54).

The exclusion criteria were designed to ensure that interviews could be undertaken with patients and nurses who could understand the questions and express themselves in English to remove any issues with translation. For nurses, a certain element of experience (in this case 12 months) was a requirement to ensure that the nurses were familiar with postoperative pain and had experience of more than one situation. Minor surgery was considered more appropriate for issues relating to pain as the study wanted to focus on situations where there was little risk to the life of the patients but where the patients stay at least three days in the hospital (e.g., surgical biopsies and ankle arthroscopy). In addition, provisions were made to ensure that the patients interviewed were those who had fully recovered after the surgery and were deemed ready for discharge. This helped to remove any issues that the patient or nurse may feel when dealing with scenarios where they may still require postoperative care and may feel uncomfortable about being truthful if they believe that the current methods of care have caused any unnecessary pain or other issues.

3.9 Interview Strategy

It was considered that the semi-structured interview format would allow for the interviews to combine the flexibility of the unstructured open-ended interview with the directionality and agenda of an open ended questionnaire design (Schensul et al., 1999). This helped to ensure that the questions could be pre-formulated in accordance with the overall research aims, but could also allow the exploration of points and issues through the course of the interview. The choice of the semi-structured interview was considered appropriate to allow for an in-depth understanding to be gained in accordance with the grounded theory approach (Denscombe, 2010). To understanding the context of the interview strategy an overview of the nurse schedule has been detailed below to provide an overview of the ward and the day-to-day activities which take place.

The surgical ward selected for this research was based in Kuwait in a postoperative surgical ward. The interviews took place in the surgical ward only with both male and female wards and nurses. The nurses on the ward operate a shift pattern from 7am-2pm, 2pm-10pm and 10pm-7am with a usual nurse meeting take place prior to each shift change. The ward does not permit morning visitation, with visitor hours restricted to the period between 4 and 8pm. During the morning shift (from 7am) the nurses usually begin by making the patient's beds before administering any necessary medication. After this has taken place the doctors then

make their rounds. It is usually the case that the nurses are preparing patients for surgery or are receiving a patient from the operation theatre during the morning shift. The ward itself is divided into private and public rooms – with private rooms containing one bed and an en-suite toilet, and public rooms containing four beds with one toilet between them. The surgery was usually undertaken in the morning to early afternoon rather than in the evening, meaning that it is often the afternoon or morning shift that immediate postoperative pain assessments were made and pain management programmes initially devised.

3.9.1 Semi-Structured Interview Schedule

The semi-structured interview approach was considered the most appropriate data collection tool to obtain the subjective information from the chosen participants and allowed the researchers to obtain comprehensive responses from each participant. Without constraining the questions that were asked during the interview, the semi-structured schedule served as a guide for the researcher in navigating the interview process. In this regard, the semi-structured interview permitted more flexibility rather than more rigid questioning associated with structured interviews. This is apparent in terms of the sequence of discussions, allowing participants to raise and pursue issues that may not have otherwise been included in a pre-devised schedule (Cohen et al., 2007). Closed-ended questions were utilised for gathering information with regard to the research interviewees' demographic profile (such as the number of years employed). Once this had been established (for use in data assembly and assessment), it was considered that questions relating to postoperative pain would be best served by a semi-structured interview that allowed for more in-depth discussion and ongoing theory building by exploring some of the issues raised in more detail - thus helping to maintain a grounded theory approach.

The researcher purposely questioned surgical nurses about assessing and managing patients' pain using open-ended questions. This type of question helped to generate rich textual data and effort was made by the researcher during the interview to avoid the use of leading questions – such as 'do you think that was related to….' or 'when did you stop complaining' which can both suggest something that may not be analogous in the first instance and may indicate that there was continuing complaints in the second. To ensure that theories could be developed, however, the researcher did ask participants to elaborate their answers by using more probing questions where appropriate. This approach to interviewing which develops

probing questions is in contrast with leading questions where an investigator would use questions to gather information in the direction that the investigator wants. In probing questions, an investigator will help participants to articulate their perceptions in more detail.

In addition to probing questions elements of informal member checking were also introduced during this research. In accordance with the methodology of Guba and Lincoln (1985) during data collection participants were asked to correct error of fact or interpretation. This form of informal member checking also allowed the researcher to establish the accuracy of categories, interpretations, and constructions as the data evolved (De Chesnay, 2015; Guba and Lincoln, 1985). In grounded theory methodology, the findings of in-depth interviews are constantly compared and analysed to determine if the contents of the interview guide have to be revised. The constant comparison and analysis of emerging data during data collection helped to refine the new sets of questions until the researcher was able to arrive at a theory which could contribute to an understanding of nurses' assessment of pain.

Before the interviews took place a schedule was established with the participants to ensure that the research was not affected by time limitations and that a suitable time and place could be arranged for the interview to allow the nurses and patients to participate. Morning interviews were considered to be most desirable as this was outside standard visitor hours and would reduce disruption for patients. As nurses were often preparing patients for surgery or receiving them immediately from the operation theatre, those patients who would be ready for discharge (meeting the inclusion criteria of the work) were considered to be almost free from pain at this time. In addition, as this was not close to visitation hours there were no additional distractions from elevated levels of activity. Private rooms were used for both patient and nurse interviews so that patients felt more secure and able to answer truthfully without being concerned about being overheard. This helped to ensure that the patient was more composed and improve the accuracy of the responses by reducing distractions. Although this was the desirable time the patient was given the final decision on determining when the interview was to take place. The length of interviews tended to vary dependent on the participant being interviewed however, on average interviews lasted between 30 and 60 minutes. These were recorded by the researcher through a memo system based on handwritten notes which were then transcribed (including details of observed nonverbal behaviours) onto a secured digital document.

3.9.2 Communication and Interview Method

Communication was also an important aspect of the interview strategy. It is defined as 'a dynamic process that involves the sharing of information between individuals' (Sheldon, 2009, p.8) and is considered as something that is central to human interaction (Wallis, 2011). In the grounded theory approach and inclusive of elements of symbolic interactionism the different methods of and elements of communication need to be addressed as this will influence the researcher's ability to interact with people at different professional levels and across a wide range of scenarios matters a lot (Funnell et al., 2009). This needs to take into account that communication can take both verbal and non-verbal forms. To ensure that the correct methods of communication were adhered to and with reference to symbolic interactionism the following interpersonal principles were adopted during this research to indicate, establish and maintain the social relationship between the researcher and the participants (as outlined in Vilar and Inglesa, 2000, p.3 and Leech, 1983) .

1. *Co-operative Principle*. According to this principle we interpret language on the assumption that the sender is obeying four maxims:

- Maxim of Quality: 'be true'
- Maxim of Quantity: 'be brief'
- Maxim of Relevance: 'be relevant'
- Maxim of Manner: 'be clear'

2. *Politeness Principle*. This principle may be formulated as a series of maxims people assume are being followed in the utterances of others. These maxims are:

- Don't impose
- Give options
- Make your receiver feel good

Non-verbal communication is also an important consideration for the interview structure. Facial expressions and body language convey messages and emotions and are an important aspect of reacting to the participant's responses to the questions (as outlined in Rosdahl and Kowalski, 2007). In line with this, the researcher's eye contact, facial expression, and other bodily movements like posture and other mannerisms also affect the clarity of communication between the researcher and the participant. Engaging in eye contact connotes

honesty and sincerity on the part of the researcher and, as such, it was essential to establish eye contact with the participant during the interview. Body language was also an important consideration, as the researcher's posture can indicate confidence or otherwise. It was therefore important for the researcher to sit upright while interviewing the participant, but not in a way that may intimidate the participant (a problem discussed in Rosdahl and Kowalski, 2007 and Hadley, 2015). During this study nonverbal behaviours were also recorded to establish elements of the relativist ontological positions of respondents. These behaviours were considered during the analysis as they were important in establishing emphasis and context for some of the respondents - particularly when considering sensitive issues such as pain and care and for those who may struggle to convey feelings about particular issues relating to these two areas. This references the concept of veracity in which answers are supported by actions and emotive behaviours and consideration is given to the fact that these interviews are taking place under controlled environments (Keele, 2011).

Another practical issue that was considered during the interview process was the veracity of what the participant stated during their answers and how this related to answers which were obtained throughout the interview process and are inherently subjective in nature. During this research it was considered that the veracity of the answers given by the participants was supported by their actions and emotions. This was assessed within a naturalistic paradigm based on a research design that incorporates the use of observation, description, interpretation and understanding of a given research topic that takes place within the real world rather than in a controlled environment (Keele, 2011). This study aims to determine how the surgical nurses can detect if the postoperative patients are experiencing acute pain and, as a result, descriptions and interpretations of the research interview are made in conjunction with observational results. This approach was made in order to gain better understanding on how the surgical nurses are able to diagnose and manage acute pain among the postoperative patients.

A fundamental part of grounded theory is to discover the core category that is essential in explaining the level of patients' pain (Polit and Beck, 2008). This meant that when data was collected during the interview process, focus needed to be placed on identifying common factors in the responses of both the surgical nurses and postoperative patients. These common factors included both positive and negative emotions. The purpose of conducting a face-to-

face interview is to increase the chances wherein the researcher can gather the research interviewees' personal opinions with regard to their postoperative pain and understand how this related to both positive and negative emotions and feelings. In this research this allowed the researcher to gain a better understanding with regard to the patients' feelings, attitudes and influences on behaviour each time the surgical nurse is assessing their postoperative pain. This helped to generate meaning and context for the research by addressing the concepts of symbolic interactionism in assessing the results of the interviews. As a result grounded theory offered the most practical research approach in terms of communication and the interview method as it allowed for more scope to determine the social and behavioural patterns of the patients in relation to pain (Polit and Beck, 2008).

3.10 Data Collection

This research adopts qualitative research techniques for data analysis. To ensure that this approach facilitated the development of theories throughout the research, robust data collection techniques and the documentation of research procedures was established before the interviews were conducted (in accordance with the work of McLellan et al., 2003; Malterud, 2001). Transcription rules were obtained from McLellan et al. (2003) and Mergenthalaer and Stinson (1992) who reference seven key principles when undertaking qualitative research involving interview methods (detailed on McLellan et al., 2003, p.65):

1. Preserve the morphologic naturalness of transcription. This establishes the form of commentaries, and outlines the importance of using punctuation as close as possible to the speech presentation.
2. Preserve the naturalness of the transcript structure. This principle establishes the importance of keeping text clearly structured by the use of various speech markers.
3. The transcript should be an exact reproduction.
4. The transcription rules should be universal - this ensures that the transcripts are suitable for both researcher and computer use.
5. The transcription rules should be complete and constructed using everyday language.
6. The transcription rules should be independent.
7. The transcription rules should be intellectually elegant - limited in the number, simple, and easy to learn. Interviews were transcribed personally and included observed behaviours and emotions.

As previously discussed data was collected through face-to-face semi-structured interviews with nurses and patients with the researcher transcribing personally all data obtained. Hancock (1998) relates that data collection in a qualitative research involves direct encounters with individuals through one to one interviews, so it was considered appropriate that a qualitative approach was justified in this research. In addition this approach to more in-depth interviews allowed for the intensive exploration of topics with participants who have had related experiences. Open-ended questions were used during the interview to elicit more information and, in accordance with the grounded theory methods, allow for theory building to continue throughout the work. This is in contrast with close-ended questions where participants are presented with choices to represent their answers and, as a result, is often more suited to quantitative research analysis. The main questions delivered to the nurses cover the main areas of interest such as how one is to know when patients are in pain, the parameters or cues that the patients are to use to signal that they are in pain, the most common reactions of patients towards pain, how to assess the pain, and find out if all patients complain about their pain. This was achieved by refining the transcripts during coding and data reduction when decisions were made about what was to be transcribed and what was to be left out (McLellan et al., 2003).

In accordance with grounded theory methods and to ensure that elements of symbolic interactionism are considered transcripts include elisions, mispronunciations, slang, grammatical errors, nonverbal sounds (e.g., laughs, sighs), and background noises (as suggested by McLellan et al., 2003). In addition, and again in accordance with the outline of McLellan et al. (2003), the researcher in transcribing data ensured that attention was paid to where and when punctuation was required, so as not to 'change the intent or emphasis of an interviewee's response or comment' (McLellan et al., 2003, p.66). As data collection continued gaps in the research became apparent and concepts reached their proper density (such as in the cases of responses from the patients in relation to pain relief) so theoretical analysis was adopted to determine further inquiry (De Chasney, 2015).

3.11 Data Analysis

Through the narrative gained within the interviews it was considered that qualitative research assessments would allow for a greater amount of engagement with the study group to get a closer perspective (Luton, 2010). With a limited group of respondents, it was also considered

that no meaningful quantitative analysis could be carried out, with qualitative methods relating to a more in-depth analysis of responses seemingly more appropriate. Data analysis begins by discovering patterns and themes hidden in the individual responses of the participants (Polit and Beck, 2008). In grounded theory methodology, data collection and analysis occur simultaneously as part of the constant comparative analytic approach (Bryant and Charmaz, 2010). As the analysis progresses, gathered data is structured into smaller categories. This makes it easier on the part of the researcher to organise a conceptual framework in accordance with the basics of grounded theory in developing theories through the work (Giles, 2002).

The data obtained was in narrative form comprising of sentences and statements from the participants. To facilitate data assessment the researcher individually scrutinised the data and compared this over different groupings – so as to introduce a formal coding exercise. When analysing data grounded theory involves three types of coding known as open, axial and selective coding (Strauss and Corbin 1998, p.217). Open coding relies on the comparison of the differences and similarities, tagging portions of data depending on their content (Strauss and Corbin, 1998, p.217). In axial coding, the researcher sub-categorises the data under broader headings by seeking the relationship between the codes (p.217). Selective coding focuses on incorporating and filtering the findings (p.217) and helps to concentrate attention on just the core codes which emerge from open and axial coding (Strauss and Corbin, 1998, p.217). In this work, these codes included the nurses' perception of pain, the non-pharmacological methods for reducing pain, and assessing pain, factors affecting quality of pain assessment and challenges to assessing pain, perceived adequacy of pain assessment; and providing pain management. This is one of the critical issues in grounded theory methods, as a fundamental understanding of data analysis in grounded theory is constant comparative analysis, which gives the researcher general instructions on how to move forward analytically with the data (Bryant and Charmaz, 2010).

The analytical procedures described above led to a new understanding of the studied process (as outlined by Charmaz, 2003). In this work constantly defining and redefining categories, allowed the researcher to become theoretically receptive and gain a better understanding of what participants view as being significant and important (Charmaz, 2006). In the first stage of data analysis, familiarisation of data was conducted before the open coding process began.

During this stage, the researcher read the transcripts a number of times to become familiar with the responses of the participants and to identify initial concepts and categories. Relationships between the concepts themselves were also identified during familiarisation, before the open coding exercise on the interview transcripts was undertaken. This process involved the identifications and description of the phenomenon present in the text. Code notes were also used to support the categories that emerged during the open coding exercise. Axial coding was then undertaken to determine relationships between the codes. A relationship frame was used to help illustrate the relationships between categories. Once axial coding is complete, a selective coding exercise helped to further refine the data.

In most qualitative studies, computer assisted data analysis is often practiced to reduce the time spent for data analysis such as using various excel formula to consolidate or reduce data through exclusion categories or through the use of data management systems. This is often because during qualitative studies large quantities of text-based data is produced and this can become difficult to manage, disseminate and analyse. Manual data analysis would also involve constant comparison of texts or cutting and pasting of texts to codes and categories. These tasks are time consuming and could be efficiently reduced with software for qualitative studies - for example, computers could be used to copy passages and paste them under a code instead of manually cutting these passages. Despite the strengths of qualitative study software, complex data management systems and analysis will not be used in this study. While this type of software could reduce the time needed to analyse all the transcripts, it still has some important limitations.

Al-Busaidi (2008) explains that while computer assisted analysis of transcripts from qualitative studies could improve efficiency in managing data; it is not ‘a substitute for immersion in the data’ (p.15). Al-Busaidi (2008) also argues that it takes time to learn and practice the computer programme, which could take considerable time and effort. Further, a computer programme does not possess the knowledge that researchers have in making comparisons of data or identifying patterns and interpreting data. As the researcher in this instance has significant experience in the field of assessment (nursing and postoperative pain) it was considered that data analysis would be enhanced if conducted personally, rather than through a digital coding and refining exercise. Al-Busaidi (2008) also adds that computer programmes tend to count occurrences with those occurring frequently given more attention

and, as a result, isolated incidences are ignored during data analysis. When utilising software based analysis approach categories are also labelled and fixed, making it difficult for the researcher to change these categories - something which would have been a key limitation of the grounded theory elements of this research. Based on the weaknesses highlighted the researcher chooses to analyse data manually. Indeed, it was recognised that utilising a grounded theory approach and qualitative research design ensured that the researcher was an integral part of the process, as the instrument through which data collection and analysis are conducted. The researcher's background in nursing helped to promote theoretical sensitivity when reviewing the data allowing for more probing and dense assessments of the data to be undertaken (Brown et al., 2002).

3.12 Transferability, Reliability, and Credibility of the Study

According to Moule and Goodman (2009), content validity in a qualitative study is possible if the data obtained from the semi-structured interview questionnaire corresponds with the main purpose of the research study. As discussed by Charmaz (2006) it is important to note, however, that the concepts of reliability and validity are not appropriate for grounded theory (Brown et al., 2002; Corbin and Strauss, 2008). Instead issues of transferability, dependability, and credibility should be established when using the grounded theory approach to strengthen the findings of the study. Using a well-structured and reliable research interview schedule can help improve the accuracy of the research and its comparability and transferability to identify possible comparison groups and how data might translate into different settings and cultures (Guba and Lincoln, 1985; Cohen et al., 2007). It is important to note, however, that it is not the researcher's task to provide an index of transferability, but to provide sufficiently rich data from a robust methodology so as to allow the users of the research to determine whether transferability is possible (Guba and Lincoln, 1985, p.316).

Creswell (2009) notes that transferability might be difficult to achieve due to the differences of sample population, and in this research, there was risk that patients and nurses may have different characteristics compared to another set of nurses and patients from another healthcare setting. In addition, it was considered that there might be differences in the policies of different hospital settings which influence how future studies are conducted. The use of a grounded theory methodology where purposive and theoretical sampling will be practised could also influence transferability of the findings to other healthcare settings.

During this research, it was hoped that the transferability of the project was enhanced by using a variety of different participants perspectives, removing various demographic requirements (such as having a required number of men or women or an upper age limit) as well as contributions from the researcher through memos. This work also ensured during the structured section of the interview that the population was adequately described, allowing for future researchers to make determinations about the practical application of this inquiry in other settings (Brown et al., 2002). Transferability was also enhanced by provided in-depth descriptions of both the settings of the interviews and the population from which the interviewees were selected.

In Grounded Theory, research reliability is linked to elements of transferability, dependability and credibility, and is highly dependent on the consistency of the data collection tool (Moule and Goodman, 2009). The concept of reliability in this context can often refer to the notion that an independent researcher could arrive at the same conclusion of this study by following the same methodology used (Polit and Beck, 2008). Through the naturalistic approach outlined by Guba and Lincoln (1985, pp.189, 300) there are a variety of threats to external reliability including:

- Selection effects: where constructs selected in fact are only relevant to a certain group
- Setting effects: where the results are largely a function of their context
- History effects: where the situations have been arrived at by unique circumstances and, therefore, are not comparable
- Construct effects: where the constructs being used are peculiar to a certain group.

In line with this, the in-depth, face-to-face interview using a semi-structured interview can help to reaffirm the reliability of the results obtained because this strategy will allow the researcher to stay focus on asking only questions that are related to the research topic. Although it is possible on the part of the researcher to ask questions outside the semi-structured interview questionnaire, excessive questions outside the scope of the semi-structured research questionnaire can alter the reliability of the research interview result.

Credibility is a construct that refers to how much the data collected accurately reflects the multiple realities of the phenomenon (Guba and Lincoln, 1985). Essentially, this determines that credibility is established when data sets obtained are accurate (Polit and Beck, 2008).

This was achieved in this research by establishing a prolonged engagement with the participants and by continually sharing with each participant the verbatim transcript of the interviews which took place and drafts of the emerging concepts which would be discussed (as described in Brown et al., 2002). This was encouraged throughout the interview (establishing if what was transcribed was correct) and also after the interview had taken place when interviewees were provided with copies of the transcripts to review. In addition, provisions were made for patients and nurses willing to compare and check the transcripts and provide feedback through member checking. For instance, the researcher made effort to contact nurses and patients to help validate the categories or themes generated from the transcripts. This was done to ensure that any categories or interpretations were consistent with their original answers and perceptions. This is an important element of establishing credibility for the research as outlined by Guba and Lincoln (1985). This also helped in obtaining more dependability for this research to ensure that 'the data represent the changing conditions of the phenomenon under study' (Brown et al., 2002, p.9). As one of the key features of Grounded Theory is that is incorporates different conditions, properties and dimensions of a phenomenon (Brown et al., 2002), dependability was an important consideration for this research.

3.13 Ethical Issues

Ethical issues in research are important because they can establish discipline and a code of conduct for the research – promoting the aims of the research, the values which will be essential in the collaborative elements of the work and in ensuring that the researcher can be held accountable to the wider public (Resnik, 2011). The potential for ethical violations varies between researches and as such there is no established framework to follow prescriptively in relation to the full list of aims and objectives of this research. Reference has been given to professional regulatory frameworks such as the World Health Organisation ethics framework and this section will provide an outline of the most relevant ethical issues in this particular research and the measures taken to ensure that they were properly addressed.

3.13.1 Summary of Ethical Issues

Ethics were considered to be a significant issue in this work as primary data was obtained from members of the general public. As a result, it was important that ethical issues were considered to protect the anonymity of the respondents and to ensure that the data was

obtained and stored in a confidential manner. It was decided that the respondents would be assured of complete anonymity and participation was entirely voluntary. To ensure that they were happy and fully understood the context of the interview a consent signature was obtained in each case. In addition, participants were provided with a full and detailed information sheet outlining the aims and purpose of the study, its objectives and the benefits in participating in the study. Information on possible side effects from their participation in the study was also explained in detail. All participants selected for study were over 18 years old and to avoid implications for obtaining informed consent. In accordance with the work of Oktay (2012) each participant was also be provided with a copy of their 'case studies' and any lengthy quotations that were used in this research so they were able to review these prior to publication. This was to ensure that the meanings and behaviours are considered so that what is transcribed reflects the feelings and thoughts of the interviewee and has not been misinterpreted. In this regard the behaviours were isolated as observable, and the thoughts and feelings as non-observable, so it was important that these were clarified.

3.13.2 Interview Policies and Participant Framework

Initially patients were given a minimum of 24 hours to decide whether they wanted to participate and consent was obtained from patients who wished to participate when they were deemed ready for discharge. This 24 hour instruction period was introduced to allow the selected interviewees to decide if they wanted to participate and helped to ensure that the patient was not pressured to take part in the interview against his or her wishes (as discussed in De Chesnay, 2015). It was also important to be sure that the patients wanted to participate and were doing so of their own free. This was achieved, in part by obtaining a signature on a formal consent form before the interviews took place. It was also emphasised that the participant has the right to withdraw from the study at any point (De Chesnay, 2015). This allowed the participants to make informed decisions and facilitated a degree of autonomy within the interview process. This notion of autonomy was refined further in accordance with the method suggested by Higgs et al. (2008) who outlined that the principle respect for autonomy should be 'grounded in conditions of intention, understanding and lack of controlling influences' (Higgs et al., 2008, p.283).

Informed consent was considered as an on-going process through this research rather than a single detached event (as outlined in NMC 2010). In nursing care, consent is the legal means

by which a patient gives valid authorisation for treatment and care (Caulfield 2005). This NMC declaration can be applied in this case by ensuring that conversations prior to the actual interview, as well as the interview itself, are conducted in a professional and respectful manner. The participants were given time to process the information and the opportunity to ask questions if they wished to again maintain autonomy and informed consent throughout the research and as the interviews and analysis was undertaken (NMC 2010; De Chesnay, 2015). Contact details were provided to the respondents to address any concerns or questions that participants might have before, during, or after the study in line with the framework of informed consent.

This research has also considered the ethical implications of veracity in this study in ensuring that participants are aware of the obligation to tell the truth during the interviews (an important issue which is outline in Fry and Johnstone, 2002). This meant that each participant was educated before the interview took place about the purpose of the interview. The researcher also disclosed all the information related to the research in order for the participant to comprehend fully the nature of the interview. Informed consent was also obtained on the day of the interview, before the interview proceeds. This introduced an element of voluntarism through the research within the concept of informed consent and helped to ensure that participants freely choose to take part (or not) in the research and guarantees that exposure to risks is undertaken knowingly and voluntarily (Cohen et al., 2007). This also helps to adhere to the notion of autonomy by ensuring that informed consent is an ongoing process in accordance with the Royal College of Nursing (2011, p.3) which outlines that participants:

- Continue to understand what the research is about and what their participation involves;
- Are provided with any new information which might influence their decision to continue their participation in the research;
- Continue to consent to participate throughout the research.

In adhering to this framework patients and nurses were asked to describe what they understand about the study and were encouraged to ask questions before granting consent, to satisfy the researcher that the participants know what they are consenting to. There is no ethics committee in the Kuwait hospital; as such, organisational approval was obtained from

the Surgical Unit Manager and the relevant academic institution. Once ethical approval has been gained from the academic institution and the surgical unit at the hospital, formal letters were sent to the hospital administration in Kuwait and to the surgical unit supervisor or manager, requesting permission to recruit patients and staff from the hospital. Once the approval was obtained, the researcher then placed a notice/poster in the surgical ward, inviting volunteers from among surgical nurses and patients who were willing to take part in the research or those who are readily available to become participants in the research (in an method adapted from De Chesnay, 2015). The poster will include contact details for the researchers, so that anyone interested in volunteering could contact the researcher for further information. Customary procedures were followed to ensure that participants were able to ask questions, be assured of confidentiality, and select a pseudonym (as outlined in De Chesnay, 2015).

Interested participants were then sent a participant information sheet providing more detail about the study (see Appendix 1). Direct recruitment of participants will not take place, as it was anticipated that the poster will attract participants. This is a recruitment strategy common in many Kuwaiti healthcare settings, and will be familiar to both nurses and patients and was used successfully to recruit both the nurse participants and the patient participants (NMC, 2010). When a patient had formally agreed to participate in the interview, but afterward had reconsidered and declined the invitation to take part in this research the consent which had been recorded was cancelled without any risk of experiencing adverse consequences. Where this eventuality did occur all findings for that participant were removed and were not included in the research. It was also considered that where inappropriate or poor professional nursing practices are revealed by a participant in the interview, the researcher would inform the participants that it is their professional responsibility to share that information with the manager of the unit. Plain English language will be used to ensure that the information sheets are easily understood as Polit and Beck (2008) emphasise that the use of simple language and avoidance of terms that could only be understood by healthcare professionals would help improve the readability of the information sheet. This also helped to facilitate a greater degree of autonomy in regard to self-reflection and reasoning (Higgs et al., 2008).

3.13.3 Confidentiality

Confidentiality is a vital aspect of professional practice that protects human rights (NMC 2010) and is a critical element of establishing trust with participants (De Chesnay, 2015). It is a prevalent aspect of many social research projects with Frankfort-Nacmias and Nachmias (1992) underlining the need for confidentiality and ensuring that the essence of anonymity is assured. As this research involves elements of face-to-face interviews it was unreasonable to assume that patients or nurses can expect full anonymity. In terms of confidentiality, therefore, the researcher pursued a course of confidentiality through elements of non-traceability such as aggregated data (Cohen et al., 2007). Confidentiality is observed when a patient discloses information to a healthcare professional in circumstances where it is reasonable to expect that such information should be held in confidence (NMC 2010). To adhere to this the Nursing and Midwifery Council's policies on confidentiality were applied to this research and all information disclosed by the participant during the interview was considered as confidential. During the entire course of the interview until the data analysis, the participants' identity was kept confidential and all patients will be able to select a suitable pseudonym to keep their identity anonymous (De Chesnay, 2015).

The UK Data Protection Acts of 1984 and 1998 are designed to establish safeguards for data protection, the responsibilities of data users, and the rights of data subjects (Cohen et al., 2007). In accordance with these Acts, the researcher ensured that any data which could uniquely identify the person supplying it was only retained for specified and lawful purposes and that 'appropriate security measures shall be taken against unauthorised access to, or alteration, disclosure of destruction of personal data against accidental loss or destruction of personal data' (Cohen et al., 2007, p.72). Confidentiality was maintained throughout the study by ensuring that no persons other than the researcher and the research supervisor had access to the data collected from the participants. When Nurses' professional views and opinions were shared to the researcher, efforts were made through introducing anonymity to ensure that the information could not to be traced back to them. Seven key rules were established during the initial scoping of this research to ensure that confidentiality requirements of the hospital and academic institution were adhered to.

- All research participants were provided with a research code, known only to the researcher to ensure that their identity remains anonymous and confidential. This

assured the patients that their identity was protected and would not be divulged at any time of the research process or during reporting of the study's findings.

- Names and contact details of research participants were stored on a password-protected computer, accessed only by the researcher.
- All hard copies of transcript interviews were kept in a cabinet and locked. Data stored electronically was copied in a password protected computer, accessed only by the researcher.
- A digital voice recorder was used for transcribing. The recorder has Dragon Naturally Speaking software, which is one of the best speech recognition software systems.
- All data transported on computer discs, CDs and USB memory sticks was identified using codes and encrypted to protect against loss.
- All publications of data were also written in a way so as to disguise the identity of the research participants involved.
- Data which was not used which could have identified any of the individuals who participated in the study unless prior consent was obtained from the individual involved.

3.13.4 Academic and Institutional Ethical Codes

Permission was also obtained from the relevant academic institution before undertaking this research. Once College ethical approval was obtained, the researcher issued a formal letter to the hospital administration in Kuwait and to the surgical unit supervisor or manager requesting permission to recruit patients and staff from the hospital. When this approval was gained the researcher then placed a notice/poster in the surgical ward inviting volunteer surgical ward nurses and patients to participate in the study (as discussed earlier). There is no ethical committee in the Kuwait hospital; therefore organisational approval was gained from the surgical unit supervisor or manager. Data will be stored and archived for a maximum of 3 years, after the graduate award has been made, to allow verification of data from external sources if necessary, or longer if used for further research. All interview responses were stored digitally on a secured server, with only the overall data from each respondent presented in this work.

3.13.5 Beneficence of Research

Cohen et al. (2007) indicate that would-be participants could be persuaded to take part in research if it is made clear that it will, or may, bring personal, educational and social benefits and as such it was considered to be an important aspect of the ethical framework and the justification of the research itself. In the present study, the ethical principles of beneficence and non-maleficence were observed. Beauchamp and Childress (2001) state that researchers should observe the participants' rights and ensure that no harm is done to them in accordance with the ethical principle of non-maleficence. This research has also considered the ethical principle of beneficence which states that a research study should have some benefits to the participants of the study (Beauchamp and Childress, 2001). Patients will benefit from this study in a number of ways. An exploration of their perceptions on the quality of care they received during assessment of their pain has helped inform nurse managers and policymakers on gaps in nursing practice. Findings from the patient interviews has also shown whether patients are satisfied with the care they received during pain assessment and the study has also revealed whether pain assessment contributed to pain relief.

It is also considered that nursing participants would also benefit the findings associated with this research. Since one of the aims of the study is to determine the factors that influence pain assessment, any findings would help inform nurse managers and policymakers in Kuwait on the current status of nursing pain assessment in postoperative care. If a gap in knowledge and actual practice is discovered, nurse managers could initiate education programmes to improve current nursing practices where required, or use this research as a conduit for implementing change. As shown in the initial review of literature, education programmes for nurses have been shown to improve pain assessment amongst nurses (Abdalrahim et al., 2011; Zhang et al., 2008) and these studies also showed that quality of patient care also improved. Although the studies failed to determine if pain relief of the patients significantly improved after the pain education programme, the patients were correctly assessed for their pain level and received appropriate interventions.

In Kuwait there is a current gap in knowledge on whether improved assessment of pain and correct usage of assessment tools would also lead to pain relief amongst patients. One of the objectives of the present was to investigate whether patients experience clinical pain relief after receiving care from nurses. The findings of the patient interviews have helped to

demonstrate whether nursing patient assessment also translates to improved pain relief. This is of benefit to both nurses and patients as nurses' experiences and understandings in assessing pain of the patients could lead to better quality of care. Further, conducting the study in the context of Kuwait's healthcare system has also provided evidence on how nurses assess the patients' level of pain during postoperative care. Improvements in nursing practice could then be made if the study demonstrates that there are gaps in nursing assessment.

CHAPTER 4: DATA ANALYSIS AND RESULTS

4.1 Qualitative Analysis of Interview Data: Overview of Techniques

In total ten interviews were conducted with nurses (identified with the prefix Nurse or N) from the Kuwaiti hospital and ten outgoing patients (identified with the prefix Patient or P), in keeping with the inclusion and exclusion criteria described in the methodological outline. In accordance with the grounded theory methods outlined in Corbin and Strauss (2008) the analysis was conducted through four main stages by looking at the development of (a) codes, (b) concepts, (c) categories, and (d) theories. The interviews undertaken were initially coded using the open coding procedures and categorised by content into thematic categories, to reveal and explore key analytical themes. This open coding system was used to identify key components of the data related to the topic of interest (nurse pain assessment) that would be used in the gathering and subsequent organisation of key points in the data. Concepts encompassed the collections of (or groups of) codes with similar content, allowing the data to be grouped and re-organised into elements of larger thematic concepts. The concepts, therefore, were further grouped into categories which were a broader set of groups organised by similar concepts. These broad groups of similar concepts drawn from the data were then used to develop theories related to the phenomenon of nursing pain assessment.

Following open coding the data was analysed through axial coding processes, before being further examined by selective coding to ensure that theory generation could be completed. During the open coding process, the data was broken down into smaller codes, encompassing key statements in the data relative to the topic. These codes were then compared using constant comparative method to allow for the codes to be re-categorised according to other similarities (as discussed in Klob, 2012). When this process was completed categories and themes emerged from the data and were constantly compared to verify relationships between the coding content (in accordance with the methods outlined in Corbin and Strauss, 2008 and Klob, 2012). Following the initial open coding procedures, axial coding was used to reorganise the data into categories – allowing for the data to be pieced back together in new ways to reveal to reveal themes in the data. Axial categories were formed by identifying the connections between coded content and categories. After the axial coding had taken place selective coding was introduced to identify the core categories through constant comparisons of categories (Corbin and Strauss, 2008; Kolb, 2012). Major categories are refined and

combined with concepts of similarities and relationships to define these core categories and develop the theories for discussion in this work. The core category for this study can be used to understand how nurses in Kuwaiti healthcare settings assess pain of patients following surgical procedures.

4.1.1 Overview of Open Coding Exercise

Open coding is a key preliminary process in grounded theory analysis. During this process, the researcher breaks up the data into small, meaningful parts. Corbin and Strauss (2008) proposed various means of exploring the data and extracting the relevant sentences, statements, thoughts, and ideas of the participants. During this research the researcher reviewed each transcript and related notes to become familiarised with the data and then in a process of line-by-line coding, assigned meaning to each relevant statement. Coding in this way allowed the researcher to group data into clusters or blocks of similar response types. In this process of *in-vivo* coding, the textual statements of the participants taken directly from the interview text are identified and coded into meaningful units (adhering to the open coding process as outlined in the example below). This ensured that the actual words of the participants were highlighted and explored using *sensitivity* to understand and extract meaning (Corbin and Strauss, 2008) and develop shared meaning among the participants. This was conducted on a line-by-line analysis of the transcribed interviews, identifying each open code and exploring that code for properties that provide meaning to the statement and may connect with other open codes. For example, in the sentence below by respondents N4 and N2, the codes which affect pain have been highlighted in bold:

> *The pain depends on what **type of surgery** patient has [had]. Even though if it's a **minor surgery**, but if it is **anal**, pain will be very painful. Those patients most frequently, they will ask for painkiller. And of course the **major abdominal surgery**. Sometime it **depends on the patient**.* (N4)
>
> *It **depends on the severity** and the **operation** was done to him if it's **major operation** for example **laparotomy**. And sometime patient[s] come with PCA, Pain control anaesthesia.* (N2)

In this instance of the coding exercise there are clear categories emerging in the text such as notions of surgery type (minor and major), and concepts around the type of patient of surgery and how these relate to the type of pain that the patient experiences. In addition, to further

emphasis the legitimacy of these findings, these words are extracted and validated with participants prior to analysis of their association and meaning to comply with the established ethical framework of this research.

4.1.2 Concepts and Axial Coding Categories

The review and refinement of meaning within the data was continued throughout the analytical process using a constant comparative method which allowed for the comparison of the open codes and categorisations of codes to continuously assess similarity and differences (Corbin and Strauss, 2008). To accomplish the constant comparisons, there was a need to frequently return to the context of the statement in the transcript to extract or relate additional meaningful components. Categorising the open codes helped to organise the data into meaningful categories and demonstrate shared meanings as concepts similar across the group of participants. The data from the various interviews were re-explored throughout the interview process to ensure the ability of the researcher to engage in constant comparisons throughout the process. It was noted during the initial open coding exercise that the results were varied and lacked consistent focus. As a result it was unclear as to what data was actually relevant or not, it was preferential to over-code to ensure that the analysis was more inclusive.

The coding process continued as the interviews progressed and this allowed for the in-vivo coding to become more focused on the relevant data. This also allowed sensitisation incorporation and greater implied meaning in the data to support accurate grouping of the data into categories. The sensitising process describes a process during which the researcher re-read the interview transcripts and became more familiar with the content. During this process the researcher made effort to support the development of a broad understanding of the participants' experiences from their perspective through repetition ensuring that the data was analysed with sensitivity. The researcher's ability to be sensitive to the individual and unique experiences of the participant's world is an essential part of the analysis to support the emergence of themes.

The researcher's background in nursing helped in addressing this issue of sensitivity and also in ensuring that the knowledge and understanding of the circumstances grew with each interview analysis. Having experience as both a staff nurse and a head nurse in an operating

theatre the researcher has personal experience of acute pain related to surgery in Kuwait. In addition the researcher has experience of both leading a team of nursing and working within that team. This helped to establish a greater understanding of the dynamics of the nursing systems in these environments and allowed for the researchers own knowledge to be drawn upon and utilised in the interviews – to help follow up on certain points or offer reassurances about what the goals of the research were. In each instance, for example, respondents were asked if they understood the participation sheet and had any questions about it. Also, for the patient responses the researcher first established, before proceeding with the interview, if the patient was in any pain at that time. In addition experience of nursing systems in other countries has also helped the researcher to understand the different systems of nursing – a process which helped to drawn in comparisons from other nursing practices to see how lessons could be drawn from different areas to improve the overall pain assessment and pain management processes in Kuwait. For example the researcher's experience of nursing in different countries helped with follow up questions when one respondent mentioned the issues of different nationalities in the nursing profession in Kuwait to try and probe as to whether the nurse was able to offer an adequate level of pain assessment in this instance with respondent N10:

Researcher: *You mentioned before that you deal with several nationalities, so do you think communication is a problem or language is a barrier?*
Respondent: *Main language is Arabic and English. But if we have Indian or Pilipino patient, then an Indian staff or Pilipino staff will communicate easily with the same language.*
Researcher: *What are the most nationalities for nurses and patients?*
Respondent*: Most patient from India and Philippine and Egypt. Same nationalities with patient adding Kuwaiti patient.*
Researcher: *If you have a patient from Africa and can't speak Arabic or English, then how you will assess the pain?*
Respondent: *In this case we try to ask family member to translate or a friend maybe. But also we can use non-verbal sign. Or check his facial expression and check the vital sign.*

This contributed to further understanding in the subsequent interviews and development of similarities to form concepts and categories from the data. This sensitisation was a process that continued throughout the analysis, not only in the open coding process, but also in

understanding and developing the final core categories and ideas would be used to form a theory with regard to a nurses' ability to assess pain. The open codes were grouped by content to support understanding of the data in organised, hierarchical levels as categories and allowing for ease of comparisons between and within interviews. Again using the example of respondents N4 and N2 there are linkages within the statements and responses obtained which can be established through axial as well as open coding exercises. The table below demonstrates that when the open coding is used, the codes from the two statements are also linked together by the axial code and can be used to a common theme.

Open Code	***Axial Code – relationship***
Type of surgery	Pain will be very painful. Patient will ask for painkiller. Patient will need more nurse attention
Minor surgery	
Anal	
Major abdominal surgery	
Surgery depends on the patient	
depends on the severity [of] operation	
major operation	
Laparotomy	

The hierarchical levels of concepts developed and compared during the open coding process were eventually developed into key categories. In total four categories emerged which generated meaning about the participants world and their experience of it. In moving from a descriptive to an analytical position, the higher-level concepts were further analysed to theoretically saturate meaning about the participants' experience. The next part of this chapter explores the analytic process that was used to identify categories, such as insight into open codes, axial codes, and researcher notes and reflections that were used to create meaning about the participant's experience.

4.2 Interview Analysis – Open and Axial Codes

Through the grounded theory process of open and axial coding, several major categories were identified and explored throughout the analytical process in relation to the transcripts from the nurse interviews. Each major category developed from axial coding is discussed with the

open coding data given to support the category and theme development. When these axial coding categories were established the key themes in each were assessed to help to develop the main theories of the work (in accordance with the methodological outline of the Grounded Theory approach). The key examples of the coding exercises undertaken are presented below in tables 4.1 to 4.4. These identified the following axial coding categories for assessment:

- Non-Pharmacological methods to reduce pain
- The techniques used in pain assessment
- The adequacy of the pain assessment methods used
- Providing pain management and pain assessment
- Communication issues/barriers
- Nurses perceptions of pain
- Cultural and Social Issues

Table 4.1 Categories of Non-Pharmacological Methods to Reduce Pain

Participant Response (Open Coding)	**Coded Concept of Pain Management**	**Axial Coding Category**
We will ask them and we will talk to them. Psychological support. Some time when we talk to the patient he will forget his pain. (N2) *We assure them. Reassurance very important.* (N4)	Psychological support	
Early ambulation because this will help them reduce the pain (N3) *And I will tell them that the best thing for you that if you mobilise and do early emulation then this will help* (N4) *We will make them walk a little and ask them to void because all of these thing help them to reduce the pain.* (N5)	Early Ambulation/Increased mobility	Non-pharmacologic methods to reduce pain
We are giving the comfortable position (N5)	Comfortable position	

Participant Response (Open Coding)	**Coded Concept of Pain Management**	**Axial Coding Category**
We will ask them and we will talk to them. Psychological support. Some time when we talk to the patient he will forget his pain. (N2)	Distraction	
Deep breathing and coughing exercise and early ambulation because this will help them reduce the pain (N3)	Deep breathing and coughing exercise	
It is very important to educate the patient that this medicine I'm giving is. Of course self-education is very important. For example this will relief your pain but it does not mean that you will not have it anymore and pain will be there because you have incision. I'm telling them that even if you cut your finger pain will be there. This painkiller does not mean that this pain will be totally removed. (N4)	Patient education and communication	

This table (4.1) details the main codes which emerged from responses in relation to the non-pharmacological methods in pain assessment and pain management. The common themes running through them included identification of non-pharmacological methods including fairly generalised ideas such as educating patients, and improving communication identified in the nurses' responses to more direct examples such as deep breathing exercises, coughing exercises, distraction, putting patients in comfortable positions, and psychological support. Thus, the main theme to emerge was identified through the axial coding category, which suggested that the nurses were aware of non-pharmacological approaches to pain management and pain assessment. To identify whether these were applied in practice, a further axial coding category was developed in looking at techniques to assess pain (as shown in table 4.2 below).

Table 4.2 Development of the Axial Coding Category – Techniques to Assess Pain

Participant Response (Open Coding)	**Coded Concept of Pain Assessment**	**Axial Coding Category**
And we will check the vital signs and according to the vital signs for example if the pulse is high, which mean the patient is in pain. (N3) *We will check the vital signs and we will see if the pulse rate is very high and you can see the patient is uncomfortable* (N4) *We know from the vital signs also if he get tachycardia.* (N5)	Check vital signs and confirming pain.	Techniques for Assessing pain
And we will check the post operation site if there is any bleeding or hematoma or edema. (N3) *First we should check where is the location of the pain and the intensity of the pain. Sometimes the patient said "sister I have pain here" and I tell him, "The surgery is not here, so what wrong?"* (N4)	Check surgical site or site of pain	Techniques for Assessing pain
From the facial expression we will find out the pain. (N1) *We know that the patient is in pain if we saw the face for example grimacing face . . . you can see the patient is uncomfortable (N4)*	Patient's facial expression	
We will ask questions what is the severity of the pain how sever what type of pain. (N1) *Where is the pain, is it in operation side? Turn to your side, take a deep breathing exercise for expansion, and we can ask him question like is it tolerable pain (N2)*	Asking patient about severity of pain	

Participant Response (Open Coding)	**Coded Concept of Pain Assessment**	**Axial Coding Category**
We will ask them. Is it painful or light pain? If it is light pain we will explain to them and tell them that this is normal after surgery. Then we can give them light analgesic like Paracetamol and if it is severe pain we can give Tramal.(N5)		Techniques for Assessing pain
First if he is conscious patient they will verbalise. (N3) *Of course the patient will verbalise like too much pain and the facial expression and through assessment and the nurse should know how to assess the pain* (N2)	Complaints of pain/ verbalisation	
When they are ambulating we will make sure.. Some people get up from the bed soon. They can get up. Some people they will be in pain and screaming (N3) *If he can do something physical or need help I can anticipate and we can ask, do you have pain? (N2)*	Ability to ambulate or move	
Once we see the patient in sleep mode and stable vital signs it means the patient is free from pain. (N5) *We will not wake the patient because the medication makes them drowsy and here we can see that the patient is comfortable. (N4)*	Ability to sleep	
I think she noticed from my face and maybe I was making sounded which obviously mean that I'm in pain. She asks me about the severity? And to rate 0 to 10? I told her	Facial Recognition and Pain scale	

Participant Response (Open Coding)	Coded Concept of Pain Assessment	Axial Coding Category
9. Then she gave me a painkiller and told me that I will feel better shorty and she will come to reassess my pain again (P7)		

Table 4.2 identifies the main techniques that were referenced by both patients and nurses in relation to pain assessment techniques. Information extracted during this exercise included reference to the use of pain scales, facial recognition, looking at the patient's ability to sleep or move, verbalised complaints of pain, questioning patients about pain (this was taken from the nurse respondents), checking vital signs, checking the site of surgery, and looking to confirm the pain with the patient directly (again this was taken from the nurse respondents only). Thus, there were clearly many techniques identified for assessing pain which emerged during the interviews. This was explored further in the coding exercise below – which looked at the adequacy of pain (as shown in table 4.3).

Table 4.3 - Adequacy of Pain Assessment

Participant Response (Open Coding)	Coded Concept of Adequacy of Pain Assessment	Axial Coding Category
Yes, for me for my part it is ok. Because it depends on the patient when we ask the patient and he answer yes there is little pain and we give him paracetamol and the doctor writing paracetamol injection for 24 hrs. So that I will give a regular dose that is mild only.	Assessments used in conjunction with physician orders to provide adequate pain management	Adequacy of Level of Pain Assessment

Participant Response (Open Coding)	**Coded Concept of Adequacy of Pain Assessment**	**Axial Coding Category**
If its sever the doctor know what to give. The doctor will order and we have to carry out. (N2)		
Sure. Yes [It is accurate and effective]…Yes we are doing enough. (N5) *Yes for the pain is enough (N4)*	Patient feedback supporting effective pain management	
I think 60 % it is enough. (N3)	Patient feedback suggesting inadequate pain management and the need for improvement	
And nowadays major surgery they are giving major surgery PCA. The PCA for us more comfortable because we don't need to go after them for injection. (N5)	Use of PCA more effective and not dependent on nurse availability	
No (P6)	Feedback when asked if a pain scale (of 1-10) was applied when the nurse was assessing their pain.	Adequacy of Level of Pain Assessment
They take time to response. Sometime they response to me	Time taken to respond to patient	Adequacy of Level of Pain Assessment

Participant Response (Open Coding)	Coded Concept of Adequacy of Pain Assessment	Axial Coding Category
after half hour. And sometime they just open the door and ask me for what I need? (P9)	complaint.	

Table 4.3 looked at the adequacy of the level of pain assessment adopted by nurses in the Kuwaiti hospital unit researched in this work. From the patients, this referenced issues such as the time taken to respond to patient complaints, and the feedback, which was facilitated when the nurse was assessing their pain. From the nurses this involved the use of pain control assessment, the availability of nurses to utilise pain control assessments, patient feedback (which as a key code to emerge during this exercise), and how pain assessment could be used in conjunction with physicians orders. Again, this coding exercise was further supported in looking at pain assessment levels and the adequacy of these pain assessment when further coding was undertaken in relation to the provisions for pain management and medication (as shown in Table 4.4 below).

Table 4.4 - Providing Pain Management and Medication

Participant Response (Open Coding)	Coded Concept of Providing Pain Management	Axial Coding Category
Post operation, we will not wait and we give pain killer. The order will be there. Yes, we will see the severity of the pain. The first 4 to 5 hours we will give everybody pain killer. (N1)	Standard initial pain medication in the immediate postoperative period	Providing Pain Management
For major surgery someone will come before the surgery for patient to explain about the PCA and how to use the	PCA use: patient responsible for self-management of pain	

Participant Response (Open Coding)	**Coded Concept of Providing Pain Management**	**Axial Coding Category**
machine….Only if a major surgery and there is the option after surgery because it is a patient control if he is in pain he can press and then they will get the medicine. And some patient will prefer this method.(N3)		
Yes the order will be written with order we can if there are no order we will call the doctor but without an order we cannot give. (N1)	Physician orders required for pain medication	
So it depends on patient response to the pain analgesic when giving. Sometime patient soon after giving he will sleep and sometime people still the feel pain after giving the Tramal then we have to call the doctor because we cannot give another one within one hour… Only if the patient verbalise and complain of pain then we will decide. So we are not giving as a protocol.(N2)	Nurse serves a critical intermediary between patient and physician to support effective pain management through pain assessment	
I believe only the doctors are able to manage my pain. For example nurses cannot do anything without the doctor permission (P8)	Patient doesn't feel that nurse should be undertaking pain assessment or pain management	

Table 4.4 outlines the strategies and concepts of pain management. One of the key codes to emerge was that some patients identified that they did not feel that nurses should be undertaking pain assessment or implementing pain management programmes. The nurses themselves also indicated physician support was important in establishing effective pain management strategies – with nurses acting as an intermediary between doctors and patients (alluding to elements of the doctor-nurse game). It was interesting to note that the strategies and concepts of pain management were fairly restricted – referencing standard pain management in the immediate postoperative period, patients being responsible for their self-management of pain and communicating pain and a clear indication that doctors are the most important decision-makers in developing pain assessment techniques and pain management options.

4.3 Techniques for Pain Assessment

This section will explore the patient and nurse interviews in terms of the data that was obtained relating to the techniques for pain assessment. This includes reviewing how current protocols facilitate pain assessments from the nurses working in this particular ward, looking at the concept of pain as the 5^{th} vital sign, and looking at the current documentation procedures and the frequency of pain assessments in this particular hospital ward.

4.3.1 Protocols Assessing Pain and Pain as the 5^{th} Vital Sign

The data obtained during the interviews outlined that there is currently a perceived lack of procedure and regularity for pain assessments, suggesting the need to make a procedural change that would treat pain assessment as they treat taking vital signs. Given the perceived importance of vital signs as an indicator that the patient may be in pain, participants noted that pain should be treated as a vital sign and assessed as often. Participants in this research offered their experiences of assessing pain, in terms of presence of pain and severity of pain for patients, and the techniques they use to conduct these assessments. Checking the vital signs is helpful to identify pain that is not expressed by the patient, but is also important in terms of ensuring that the patient is not experiencing an adverse reaction to the pain medication, such as an allergic reaction that may compromise the patient's blood pressure.

> *We have to check the patient after giving [medication], after a few minutes we have to check. We have to ask him feedback and check the vital signs. Because sometimes giving analgesic the blood pressure will come down so we have to monitor.* (N2)

The results showed that the participants believed that there is a lack of specified protocols for pain assessment. Instead the nurses are required to take vital signs in measured increments and assess pain at that time as well. During this process some of the participants noted that policy and procedural standards were lacking in this regard.

> *We have protocol that we need to assess [for] vital signs and we will measure every 15 minutes for 2 hours or every 30 minutes for 2 hours and each time we proceed to them we will assess the pain also. And we will notify in the nurses notes only. No other sheet. (N5)*

During the coding exercise in relation to pain assessment several areas for analysis were extracted. For example, during the open coding of participants responses several different techniques emerged as to how different nurses assessed patient pain and the severity of pain. This included reference to the facial expressions of the patients, the behaviour of the patients, communication with the patient to establish how much pain they feel they are in, as well as reference to vital signs checks carried out by the nurses. Some of the nurses interviewed reported using various combinations of these techniques together to assess the patient and the level of pain the patient is experiencing. For example participant N3 provided insight into the informal approach that they personally use for pain assessment and referenced a combination of techniques to try and understand the severity of the pain the patient as experiencing.

> *'First of all, by facial expression. If he is in more pain then he will [be] irritate[d] and I will check the site and check the vitals also. And I will check what type of surgery. If the patient did a major surgery and if he is in severe pain by facial expression and telling and vital signs abnormal then he is in true pain'.* (N3)

This suggests that the nurse's assessments of pain in the Kuwaiti hospital – although not formally addressed through protocols and procedures – are inclusive of some of the key ideas of how pain assessment should be undertaken as described in Gelinas et al., (2006) and

Pasero (2009). Again this related back to pain assessment methods which are inclusive of a range of different strategies – particularly in considering non-verbal methods of communication as detailed by respondent N4:

> *By facial expression and in night time, even in the afternoon we will not wake the patient because the medication make them drowsy and here we can see that the patient is comfortable. Sometime just to check the pulse while they are sleepy. For me that is enough. And if he is awake we can ask him "how are you" and "how is the medicine I gave you?"…Not just asking but as I told you we check the vitals*. (N4)

This is particularly applicable when looking at Pasero's (2009) ideas about observing the behavioural signs of pain which references facial expressions as a key indicator of pain, and Gelina et al. (2006) who detail that nonverbal communication such as grimacing as a clear indictor of pain. In addition to observations of facial expressions the nurses who participated in the research also made reference to the importance of taking vital signs to assess pain. The nurse participants described changes in vital signs, such as an increased pulse/heart rate, as an indication that the patient may be in pain. These techniques for pain assessment were used in addition to patient complaints and verbalisations of pain as shown in the response of N1 below:

> *Usually patient is complaining then facial expression then we will ask the patient do you have pain? The vital signs also if the pulse going high*. (N1)

This response seemed to be an attempt to validate the patient's pain, which would in itself impact the therapeutic relationship. This assumption and the use of leading questions can, in some instances, restrict the effectiveness of therapeutic communication techniques. Leading questions may indicate to the patient that the nurse may already have a certain answer in mind – especially in cases where these leading questions concern topics that the patient may well consider to be sensitive or sources of anxiety (Estes, 2014). It is key that patients feel comfortable with nurses and can be open and honest about their pain – where this is not the case pain management and pain assessment will inevitably be impacted. To encourage more openness in communicating with patients, nurses can use strategies such as the use of silence to encourage the patient to themselves verbalise any issues which are most pressing and to direct the patient's thoughts and give the patient time to consider alternative courses of action. In addition, active listening techniques such as giving indication of reception (I follow

what you're saying) or giving recognition (noting any efforts that the patient may have made) can help to encourage more directed self-reporting on behalf of the patient and remove any assumptive assessment on behalf of the nurse. Seven of the eight participants described asking the patients directly about their pain, if they were in pain and how severe the pain is. Participant N8 noted, "*We ask the patient to describe the severity of the pain*." Participants N3 and N5 provided more detailed information in terms of how they would ask about the pain:

> *I will say "hi sir, how are you? How is the surgery? How is the pain? How do you feel?" (N3)*
>
> *Yes we ask them because we want to know the severity of the pain. And if they can tolerate or not or if they need an injection. We will ask them, "Is it painful or light pain?" (N5)*

The patient participants were also asked how they react to pain. For most patients, the pain reaction was described as wincing, or verbalising their pain. The memos below suggest that patients tended to verbalise pain to ensure that the nurses understood their pain.

> *Memo 1: The participant described action in terms of pain, shifting his position, calling the nurse, and verbalising the pain so that the nurse would understand the problem. This patient seemed to generally feel that the actions would be effective in obtaining relief from the pain.*
>
> *Memo 5: Patient describes being verbal about pain, complaining to the nurse or physician. The patient was observed demonstrating shouting and groaning verbalisations of pain.*

This method of direct questioning about the pain with the patient was a key method of assessing the severity of the pain and the patient's tolerance of the pain that was isolated from the coding exercise which was undertaken. In addition to these assessments, the nurse participants also described seeking out the source or location of the pain, and whether or not this location was the actual surgical site or not. In addition reference was made as to whether the facial expressions of the patient match the complaint and verbalisation level as indicated by respondent N3 below:

First when we will see the patient then from facial expression we can see [if they are in pain]. Then of course we will ask the patient (how are you? How is your pain?) and they will verbalise also. (N3)

In the patient data it was noted that all the patients described having pain after surgery, which was generally reduced after nurse assessment and administration of a pain reliever. In some instance, however two patients noted that the pain medication received did not reduce the pain, and a third described refusing the pain medication. For the two patients for whom the medication did not reduce the pain adequately, the nurse was reportedly unable to provide them with another pain medication until the doctor was available. These two patients also reported the absence of a nurse assessment of pain postoperatively, but only offered the pain medication without assessing their pain level. In most of the patient interviews, the patients simply responded "Yes" to the question of whether they were satisfied with the pain assessment and management. However, two patients reported dissatisfaction with the pain management, primarily due to the nurses' lack of ability to manage pain without doctor's orders.

Patient 8: No because almost anything you need you should wait for the doctor. If you have questions or need information, you need to see the doctor. If you need any paper work like discharge or sick leave or medical report you need to see the doctor. If you have any side effect or pain you need to see the doctor.
Patient 9: She doesn't give me the medicine until the doctor order[s]

Patient 9 also reported that the nurse did not do enough to reduce the pain, again noting differences from another country where pain management by the nurses was perceived to be much better. This data also linked with the previous idea that there is an apparent dissatisfaction from the patients in respect of the nurses and how they approach pain management in this particular ward.

Patient 9: [This] was not enough to reduce my pain and I suffered a lot from the postoperative pain. In contrast with other country. For example, one time I experienced pain after surgery in the United States and the management was totally different. The nurses there asked me many questions about the pain and she gave me

painkiller and she did other things to relieve my pain such as setting position, ice pack, and make me comfortable. Even when I pressed the [call] button, they responded directly. I was so happy with the service there. Even the way they responded to me helped me to reduce the pain.

This response suggests that the patient thought that in the US nurses seemed to care more during pain assessment and throughout the pain management process. In addition, there seems to be a difference alluded to in terms of the nurse response time when a patient calls and the time that was given in communicating with the patient to reduce their anxiety and make them feel safe – giving the patient the feeling that they have the nurses full attention and helping to build a healthy nurse-patient relationship. In Kuwait the nurse's reference to workload and staffing may be preventing them from giving the patient more time in a one-on-one environment. Ensuring an environment where patients feel safe and comfortable however should not be impacted by workload, but should be one of the key aims of any nurse working with patients in postoperative situations. This is further demonstrated in the response of Patient 9 who continued to describe this previous experience in another country, comparing it to the recent experience in Kuwait:

Patient 9: The way they communicated with me was different; they were really nice and they showed me that they cared about me and my feelings. … The most important thing [was] that the medication they gave was really affective and I didn't feel the pain after the medication. While here, I feel the pain even after the medication.

One participant, who expressed satisfaction with the pain assessment and management, suggested that perhaps if the patient is in more severe pain, the nurse should assess the pain more frequently. This is shown in the example from the transcript of the interview with respondent P6 as below.

Researcher: *So, did the nurse assess your pain?*
Respondent: *Umm. She asked me how I feel and I told her there is little pain. She gave painkiller. And told me if the pain not relieved to call her again.*
Researcher: *Did you the pain reduced?*
Respondent: *Yes. But I called her again after one hour and asked for another painkiller.*
Researcher: *Why?*

Respondent: *I had little pain and I don't want to feel it.*
Researcher: *Aha. I see. Did the nurse asked you to rate your pain?*
Respondent: *What do you mean?*
Researcher: *I mean in scale 0 to 10, 0 means no pain and 10 most sever. How do you rate your pain?*
Respondent: *No.*
Researcher: *Do you think the nurses need to assess more your pain? Or ask more questions to get more detail about your pain?*
Respondent: *Umm. May be. I don't know. Maybe if I have severe pain then more assessment needed.*

This data supports the idea that many of the participants in this study felt that there was not a sufficiently robust standard assessment protocol or procedure for the pain assessments and too much focus on nurses simply asking patients about their pain. This is again re-enforced in the memo data outlined below.

> *Memo 4: The patient describes that the nurse enters the room for a regular check and asks about the pain level. This was seen as an opportunity to describe their pain and the patient felt the nurse was responsive and caring.*
> *Memo 2: The nurse was reported to ask periodically how the patient would rate his pain.*

These perceptions of the patients, as recorded and interpreted by the researcher demonstrated that the nurses were perceived as adequately assessing their post-surgical pain, but that they were also less responsive to patient complaints of pain due to heavy workloads associated with being short staffed, and being restricted by the need for doctor's orders – essentially suggesting that overall patients were not satisfied with the level of care they were given. From the patient accounts, the nurses did not seem to demonstrate effective use of alternative methods of pain management, such as position, ice, distraction, and other non-pharmacological techniques for reducing pain. Given the few reports of the lack of nurse pain assessment postoperatively, the nurses may benefit from more education to try and encourage greater awareness of pain assessment and pain management techniques.

In addressing the frequency of pain assessment, it is also important to consider here is that patients in private rooms will not be as visible as those in wards, and they may need different approaches in pain management. In the UK, for example, there is less interest in private rooms in favour of the need for more supervision (Cooter and Pickstone, 2003) – outlining the importance of nurses being able to see or at the very least hear all of the patients on their ward. In this surgical unit there appears to be an emphasis on private rooms – with these facilities making up over 50% of the rooms on the ward (12-15 private rooms compared to 8-10 shared). This may prevent pain assessments outside of the usual routine as it reduces the ability of nurses to respond to other potential signs of pain such as facial expressions or wincing. This is discussed later when reviewing patient data as this was also raised during the patient interviews as a possible barrier to effective communication between the nurses and patients on the wards.

The interview data obtained suggested that nurses were aware that the type of surgery a patient underwent was a possible key factor in the level of pain a patient experienced and would affect the type of intervention used to manage the pain. This understanding should allow nurses to pre-empt the response they may receive from patient with regard to suffering from pain and what is expected of the nurses by the patients and therefore be prepared to a particular care pathway. Indeed, the data showed that nurses were aware of the response to expect from patient and how to deal with these so that for example if a patient fell asleep following administration of analgesic, nurses did not disturb them in order to make routine checks on progress as sleep would help mask the process of pain and allow patients to rest which has been shown to speed up recovery after surgery (Gilron et al., 2014). By not disturbing patients the nurses prevented unnecessary suffering by patients and the unnecessary need for drugs to treat their pain which in turn reduces cost on the healthcare service, makes better use of nurses' time and resources. One nurse (N3) pointed out that patients can suffer in silence but failed to mention what is done about this by nurses and needs to be explored further with evaluation on next course of action if this is suspected since ignoring suffering of patients could be detrimental to patients' recovery.

Pain assessment as the fifth vital sign is a prominent aspect of much of the debate concerning pain assessment over the past few decades and has also been featured in the data obtained during the interviews undertaken in this research. Indeed, two of the nurse respondents in this

study suggested that pain assessment should be treated as another vital sign, incorporating pain assessment into the regular timely assessments required of the nurse:

> *Pain should be dealt with as the fifth vital sign and every time you check the vital sign you should check pain as well (N5).*

Where pain assessment is treated as the fifth vital sign the most commonly used method to assess pain is the 0 to 10 pain numeric rating scale (NRS). This was seen in this research with respondent N10 detailing that the 0 to 10 scale was the most common tool for pain assessment – believing it to be an accurate rate of pain as the patient is able to verbalize and rate their own pain:

Researcher: '*How do assess the severity? What tools do you use*?'

Respondent: '*I ask the patient to rate the pain from 0 to 10. This is the most common tools and it can give you almost the exact rate'* (N10)

Researcher: '*Do you believe this tool gives you accurate rate*?'

Respondent: '*Yes because the patient verbalize and rate his own pain'* (N10)

Although a common form of pain assessment and its robust psychometric properties in research applications it remains only moderately accurate according to some research – particularly in outpatient situations (a problem identified in Lorenz et al., 2009). It is also important to consider that personalising assessment is becoming more common in clinical practices by can affect the performance of research tools such as a Numeric Rating Scale when it is adopted for routine use (Lorenz, 2009). It could be suggested from this literature that the nurses who identified that different patients may have different tolerances of pain need to take measures to ensure that this is not a critical part of the outgoing patient vital signs – and that this should be part of a more structured and comprehensive approach to pain assessment in the Kuwaiti healthcare system.

To be successful these evidence-based practices in pain assessment should be used in conjunction with professional expertise and patient preferences. This touches upon the work of David Sackett (1969) and Gordon Guyatt who advocate the use of critical appraisal techniques in pain assessment which are applicable to the bedside. Historically this has not been well received by many in the medical community as it suggested that clinical decisions would be less than scientific and ultimately inappropriate. What David Sackett suggested was

that the practice of evidence based medicine would be inclusive of far more integration between individual clinical expertise with the best available external clinical evidence from systematic research (Sackett, 1969). The key theme here, and one which seems to be supported by the findings of the research established in this thesis, is that there is often a lack of strong evidence to support the therapeutic interventions which are utilised within palliative care. Similar patterns were observed in this thesis with nurses seemingly reluctant to implement evidence from their own interactions into therapeutic interventions – instead continuing to be heavily reliant upon the doctors decisions on pain management (which may not be inclusive of these interactions) and their general experiences as to what certain patients who have undergone certain surgeries may be experiencing in terms of pain levels.

From the synthesis of these different ways of assessing patient pain, a theme was revealed related to the lack of robust protocols and standard procedures for pain assessment. Instead this research found that the nursing staff typically did not report using only a single tool for assessing pain in postoperative patients, but rather, tended to use different methods. These different methods form a series of checks and techniques for pain assessment against both verbalised and non-verbalised parameters such facial expression, pulse rate, ability to ambulate or to move around, and even to sleep peacefully. Herr et al. (2006) for example recommend utilising a hierarchy of pain assessment techniques rather than focusing on single objective assessment strategies. In looking at the different aspects of pain assessment Herr recommended that a pain assessment hierarchy, establishing a formal standard operating procedure for pain assessment, minimising the emphasis on physiologic indicators, and reassessing and documenting pain assessment can help to ensure that pain assessments are thorough and consistent. This standard system for pain assessment was not referenced by the nurses in the Kuwaiti hospital and may something which is limiting the autonomy of the nurses and causing some patients to feel that throughout assessments are not being conducted. If the nurses apply a consistent approach to all patients then they may feel more empowered in the pain assessment and pain treatment process, and may also develop a more trusting and communicative relationship with the patient.

What was also clear from the data extracted, however, was that no formal protocol or process for pain assessment had been implemented by the surgical unit – resulting in a lack of a consistent and robust method for individual pain assessment in postoperative situations.

Where pain assessment is not adequate there can be several consequences, and inadequately managed pain can lead to a range of adverse physical and psychological patient outcomes. This is examined by Well et al. (2008, p.469) who found that continuous, unrelieved pain 'activates the pituitary-adrenal axis, which can suppress the immune system and result in post-surgical infection and poor wound healing' and that 'sympathetic activation can have negative effects on the cardiovascular, gastrointestinal, and renal systems, predisposing patients to adverse events such as cardiac ischemia and ileus'. The research of Wells also demonstrated issues related to nursing in particular in how unrelieved pain or incomplete pain assessments can reduce patient mobility, and lead to further complications such as deep vein thrombosis, pulmonary embolus, and pneumonia (Well et al., 2008). In addition, in postoperative environments further complications related to inadequate pain assessment and pain management can not only negatively affect the patient's immediate welfare but can also impact negatively on hospital performance because of extended lengths of stay and readmissions, both of which increase the cost of care (Wells et al., 2008) and ultimately place more pressure and resource issues on the nurses in the postoperative ward.

4.3.2 Frequency of Pain Assessments and Documentation of Assessments

During the axial coding exercise in establishing categories for assessing pain, a secondary theme related to pain assessment was emerged from the interview data. This second coding category related to the frequency of the pain assessments carried out by the nurses. During the course of the interviews pain assessments were generally noted to take place every 2-3 hours, but this frequency varied depending upon the nurse questioned and in relation to the patient complaint behaviours, nurse workload and, more specifically, the nurse to patient ratio. This latter criterion was established in the response of participant N1 who suggested that the most significant aspect of the perceived relationship between the frequencies of pain assessments was the nurse to patient ratio:

> *Every two or three hours [assess for pain] and sometimes it depends on the work condition and sometimes [if the nurse has a] full patient [workload*]. (N1)

When the nurse participants were asked if they believed that there should be a tools or pain assessment sheet which will be more clear and specific, the nurses agreed, stating, "I think it is needed" (N2), but also noting the staffing and workload difficulties, which may make such a protocol impossible to follow. Follow up questions were made to probe why nurses felt it

was needed and the nurses (N2 and N3) stated that they felt it was very significant and an important element of pain assessment. This seems to suggest that the nurses want more structure in pain assessment, and a more robust set of standard procedures to follow when undertaking pain assessment. This supports the findings of Al-Khandari and Thomas (2009) who found that the most common nursing activities nurses were unable to complete when staffing levels were stretched included the adequate documentation of nursing care. This was further re-enforced by the responses of N3:

> *For me it is a workload for the nurses staff, but if they did [make it a standard and required protocol] then we have to do it. I think it is needed. But in each shift I think it is a workforce [problem] because in night shift we have 8 to 9 patients.* (N3)

Again, this was related to workload issues as being prohibitive in addressing this issue – but there is little consideration as to how a standard procedure for pain assessment will improve workload problems, and whether built into these assessment sheets will be time for the nurses to communicate with patients to understand the experiences of their pain and what the patient is feeling – rather than this becoming a somewhat arbitrary tick box exercise. Despite this response, it would be anticipated that night shifts require less hands-on nursing as the patients are asleep. This was even suggested in an earlier response when respondent N4 indicated that: '*Sometime just to check the pulse while they are sleepy. For me that is enough*' (N4). In addition, with nursing handovers taking place at the start of each shift there should be sufficient information to address any issues concerning pain through the night – or at the very least the nurses should be aware of what patients have recently experienced elevated levels of pain and may need additional monitoring.

What was interesting to note, however, was that doctor's rounds only take place in the morning, and there is no doctor rounds scheduled at any other point during the day. With nurses having limited autonomy to make decisions relating to pain management it could be that this lack of decision-making power results in a delay to those looking for pain resolution during the evenings – instead having to wait for doctors decisions the following morning where they will then often be dealing with a different nurse and may have to go over the process and discuss the issues again. Participant N3 described how a standardised pain assessment tool is needed, but was concerned that this would add to an already stressed workload on the nurse. As a result, although some patients may complain about the pain

assessment procedures in place in Kuwaiti hospitals the nurses themselves tend to describe this failure as a result of the system itself – outlining that there is simply no way to assess the pain management needs of all the patients when the nurse to patient ratio is too large. This nurse to patient ratio was noted as a challenge to pain assessment in the following section.

The documentation of pain assessments was also an important aspect of the interviews undertaken. The nurses' responses to questions related to how assessments are documented revealed that the pain assessments are generally logged in the nurses' notes or the nursing care plan. One participant also noted that for patients on the PCA machine, a log sheet is required in which pain assessments by patient pain score are logged regularly. This was considered by the respondent to be more ideal in terms of documentation of pain assessments, but only required for the patients using PCA. For example, when the interviewer asked, "*When you do these assessment and when you ask the patient about the pain and severity, you will write it in the nurses notes*," the participant responded, "*Yes in the nurses notes and in the nursing care plan*" (N1). Participant N8 described a process involving pain assessment, documentation in the nurses' notes. This participant also noted the lack of a specific documentation form unless the patient is on PCA, which reportedly has a documentation sheet for pain level. Participant N8 stated:

> *As I said before we must take the vital sign and documented. We must document the medication given. Also we should document any assessment in the nurses' note. We don't have any sheet unless the patient is in PCA. (N8)*

Participant N3 agreed, also noting the differences when a patient is using the PCA machine:

> *[They are documented] only in the notes. But there is a sheet for PCA, which contain a score that we have to write. This is only if he is on PCA, yes, and if he is not on PCA, we writing in the nurses' notes only. (N3)*

This PCA sheet was noted to be simply a recording of a verbal pain scale (0-10) score, not a full assessment. Participant N3 commented, "*Only 0 to 10 score, and this is only if he is in PCA*". When describing the protocol for assessing vital signs "*every 15 minutes for two hours or every 30 minutes for two hours,*" participant N5 discussed that the pain assessment will also be done at these times, although no specified protocol exists as to when either of these methods needs to be adopted. For example, there was no reference to established

postoperative care protocols such as those detailed by the World Health Organisation in their Surgical Care documents (2003) which detail a set list of postoperative notes and orders, aftercare protocols, discharge note specifications, and pain management techniques. There is also no specified protocol relating to pain assessment directly – outside of the vital sign protocol outlined below by participant N5. Therefore, the pain assessment is recorded in the nurse's notes and remains based on the nurses own experiences and evidence for pain assessment. In addition to adopting a formal protocol the nurses should also look to introduce regular reviews of these protocols – for example introducing bi-annual reviews to consider any recent research in pain management or pain assessment.

> *We have protocol that we need to assess vital signs and we will measure every 15 minutes for 2 hours or every 30 minutes for 2 hours and each time we proceed to them we will assess the pain also. And we will notify in the nurses notes only. No other sheet*. (N5)

These responses suggest that the nurse participants believe that pain assessments should be recorded using a more standardised protocol. This also suggests that the respondents believe that pain scale score assessments are only required for PCA patients and even among these PCA patients where the pain scale score is in place there may still be instances where a full pain assessment and associated documentation is lacking. This again may compromise the professional standards of the nurse and further compound the problems associated with a lack of professional autonomy and also a lack of ownership for the nurses themselves that pain assessment and pain management is something they need to take control of and manage more consistently and more effectively – perhaps through a more comprehensive and formalised procedure for carrying out pain assessments and ensuring that these are done regularly with the patients under their care.

Another important assessment strategy identified by the nurses during the interviews was to compare the pain level reported with the type of surgery performed. If the two do not match up, they may suspect that the patient is exaggerating their pain. The reported pain should also match with the other assessment elements, such as facial expression and vitals. Participant N3 detailed this type of scenario:

If the patient says 10, we should know also. It is according to the surgery for example if it is mild surgery and the patient telling more score then we cannot believe him if he is in true pain or no[t]. … [We assess] first of all by facial expression. If he is in more pain then he will [be] irritate[d] and I will check the site and check the vitals also. And I will check what type of surgery [patient has had]. If the patient did a major surgery and if he is in severe pain by facial expression and telling and vital signs abnormal then he is in true pain. … Yes the pain is very less but they need more attention. (N3)

This is supported by evidence of the patient interviews, including the responses of patient P7 who indicated that the nurse conducted non-verbal pain assessment. This is detailed in the transcript of the interview conducted with P7 as below:

Researcher: *Did you have pain after surgery?*

Respondent: *Yes. After surgery I had pain continuously until the next day. The next day was ok.*

Researcher: *When did the pain begin?*

Respondent: *After the surgery I was sedated and I was not aware of anything. After I was awake I felt the pain.*

Researcher: *What happened then? Did you complain to the nurse? Or did she assess your pain?*

Respondent: *I think she noticed from my face and maybe I was making sounded which obviously mean that I'm in pain. She asks me about the severity? And to rate 0 to 10? I told her 9. Then she gave me a painkiller and told me that I will feel better shorty and she will come to reassess my pain again.*

Although there was no reference from the nurse as to the frequency of the visit and how often the pain would be re-assessed, it does indicate that the nurses considered immediate assessment after surgery (through both verbal and non-verbal pain assessment methods) critically important and that the nurses are aware of the need for continued follow up assessment. This notion of comparing other assessment strategies and evidence of pain as expressed by the patient with the verbal patient complaint was also described by participant N4, however there was discussion in this interview that the tendency for patients to exaggerate pain exaggeration of pain as a need for additional attention or reassurance.

However, whether believed to be an accurate pain assessment or not, the nurses noted the need to report the pain assessment and inspect the site. Participant N4 explained:

> *We can see from vital signs and we can see the patient acting only. It depends on the surgery, if it's a small injury it will not cost that much pain. But off course we will not ignore it and we will see and ask and inspect the site. And some time they just need assurance.* (N4)

When asked whether the nurse wrote down the pain score in the nurse's notes, even though the nurse believed the pain complaint to be an effort at attention seeking, the respondents answered, "*Yes, I will write*" (N2). The nurse participants expressed evidence of understanding the importance of documenting the pain complaint in the nurses/patient notes or level as described verbally by the patient, regardless of whether this was believed to be exaggerated or not.

4.4 Non-Pharmacological Methods to Reduce Pain

Throughout this research it was noted that pain was rooted in both physical causes and psychological causes, suggesting that non-pharmacologic remedies as well as pharmacological approaches may be effective in providing pain management. This was stated by Participant N2, who asserted, "*It [pain] is physical and psychological*". When probed further on this subject the nurse indicated that pain is a '*reaction of a patient from whatever he feels regarding his illness'* (N2). When asked about whether pain affects the patient physically and psychologically, Participant N3 simply responded '*Yes*'. N3 also indicated that not all patients can verbalise their psychological feelings, however indicated that they would wait until they felt the patient was ready to cooperate with the nurses in sharing these feelings rather than discussing any non-pharmacological methods they may employ to try and help the patient express these feelings:

'*Because all patient are not verbalizing their psychological feeling. So, if the patient is cooperating and ready to share with us then I will ask.'* (N3)

This perception supports the perceived efficacy of non-pharmacological methods to reduce pain and suggests that the nurses have an understanding of the different elements of pain and how these may manifest themselves in different patients both psychologically and through physical symptoms. What was interesting however was that some nurses suggested that pain

medication was their first instinct in reference to pain assessment and pain management options. Respondent N10 for example stated:

> *'The first thing I do when I receive the patient in the reception area in the operation theatre, I talk to the patient and assure him that the surgery is done and I'm going to take him to the ward. Immediately I will ask him if he feels ok or does he have any pain. And if he or she say yes I will tell him (the first thing I will do when we get back to the word is to give you pain killer).'* (N10)

When this was probed further the respondent indicated that there was no real in-depth analysis of the type of pain experienced, or an exploration of the non-pharmacological approaches that could be used to manage this pain. When asked if there is any assessment that is carried out before giving the pain killer, the nurse responded:

'When the patient arrives to the word, first I will put him in comfortable position. Second, I will check the site of surgery and take the vital signs. Then, I will ask the patient about the pain severity and where is the pain. Based in the severity I will give pain killer.' (N10)

This reference to medication as the default response in pain management was also supported by the patient research which showed similar patterns as shown in the example extract of the interview conducted with respondent P9:

Researcher: *Did you have pain after surgery?*

Respondent: *Yes. I had severe pain.*

Researcher: *Did the nurse assess your pain or you complained about it?*

Respondent: *She gave me a painkiller and it was not enough to reduce the pain. I told her to give more and she said she can't until the doctor come.*

Researcher: *Did she assess your pain before she gives you the painkiller?*

Respondent: *What do you mean by assess?*

Researcher: *It means did she ask you about your pain For example: where does it hurt you, what is the characteristic of your pain? The severity of your pain? …etc.*

Respondent: *No. she just gave me the first does.*

This is a concerning pattern as it suggests, in the example above, that where painkillers and medication are not solving the immediate problem in pain management not further pain assessments are being carried out to try and properly explore other non-pharmacological

approaches. Indeed, in one instance during the patient interview, the patient themselves detailed that a reluctance to take medication (pain killers) due to previous experiences of the side effects of this type of medication – and it was concerning that the nurse did not discuss this before offering the medication or indeed after the patient described (as shown in the example transcript of the interview undertaken with respondent P10 below.

Researcher: *Did the nurse assess your pain? Or you complained to the nurse?*
Respondent: *She asked me if I have pain and I told her yes I do. She told me she will give me painkiller and I refused to take the painkiller.*
Researcher: *Why did you refuse to take the painkiller*?
Respondent: *I hate to take medication and I'm afraid from the side effect.*
Researcher: *Did she explain about the medication?*
Respondent: *Yes I know it is a painkiller. But I don't like to take medication. Even for my blood pressure, the doctor told me I need to take medication for my blood pressure but I'm not taking and I'm trying to reduce my weight and do some exercise.*
Researcher: *Can you tell me how did she assess your pain?*
Respondent: *She took my vital signs and asks me to rate my pain. I told her I have mild pain and I can tolerate the pain.*
Researcher: *Did she ask you again about the pain?*
Respondent: *Yes she asked me again and I told her that I still have pain. She told me to call her when I need a medication.*
Researcher: *Do you think there are other ways that might reduce your pain?*
Respondent: *Umm. I don't think so.*

Clearly the patient in this example would have been interested in discussing with the nurse non-pharmacological approaches to try and manage their pain, however the nurse in this example did not appear to have the knowledge or perhaps did not consider that this would have been an opportune moment to discuss the range of approaches which may have been open to this particular patient. Despite this example from the patient interview, among the nurse participants in this study, several types of methods were noted and most participants offered several methods used personally. To explore this issue further the nurses who participated in this study were asked if they utilise non-pharmacological methods for pain management with patients during the interviews. Responses highlighted that the nurses were

providing patients with additional psychological support, early ambulation/increased movement, and helping patients find a comfortable position. Additional methods included the use of distraction, deep breathing, and providing education and communication for the patient to understand the pain.

These non-pharmacological methods which can be adopted in pain management include physical, cognitive, behavioural and other complementary methods such as meditation, progressive relaxation, dreaming, rhythmic respiration, biofeedback, therapeutic touching, transcutaneous electrical nerve stimulation (TENS), hypnosis, musical therapy, acupressure and cold-hot treatments are non-invasive methods (Demir, 2012; Black and Matassarin Jacobs, 1997). These methods have been viewed as the controls on the gates that are vehicles for pain to be transmitted to the brain and affect pain transmission or the release of natural opioids of the body such as endorphin (Demir, 2012). As a result these are important elements when looking at the Gate Control Theory of pain. It is also important to consider, however, that some patients may not consider non-pharmacological approaches as suitable in delivering effective pain managements.

Non-pharmacological interventions were explored with patient 8, however when asked what they thought of these methods the patient stated that, although it was helpful in '*reducing the pain such as patient position or raising the legs....medication are more effective'*. This suggested that the patients believed that prescribed medication from the doctors are the most appropriate method of pain relief. This may also suggest that nurses could do more to communicate the benefits of non-pharmacological methods and explore these alongside the patient. This seems to fit in with the findings of the nurse interviews which suggest that non-pharmacological pain management methods are understood in relation to the psychological approaches that could be taken, but that nurses lack the autonomy or even the confidence to discuss these and a variety of other options in depth with the patient as an alternative to wholly medicated pain management.

During this research, although the nurses in the Kuwaiti hospital seemed to be aware of the general basis of non-pharmacological methods for pain management, however they did not seem to have the autonomy to explore these options as genuine alternatives to more established pharmacological pain management techniques. Throughout the interviews there

was little reference to the non-pharmacological methods highlighted above other than the use of distraction, breathing exercises and discussing the pain that the patient was feeling to generate greater understanding. Examples include the reference to distraction methods by nurse N2 in the transcript examples below.

Researcher: From your experience in these 18 years, do you think the patient satisfied with pain assessment and pain management? Or most of them complain.
Respondent N2: *In my opinion they are satisfied because after giving the analgesic it will response to pain and may be seldom only they are asking and asking and not happy. Some from the theatre they are giving PCA. Some people like PCA and sometimes patient does not like PCA.*
Researcher: *What other strategies you do to relief pain? I mean rather than giving pain killer or medication.*
Respondent N2: *We will ask them and we will talk to them. Psychological support. Some time when we talk to the patient he will forget his pain.*
Researcher: *What approaches do you use to assess patient pain?*
Respondent N2: *where is the pain, is it in operation side? Turn to your side, take a deep breathing exercise for expansion and we can ask him question like is it tolerable pain? Grimace face? If he is shouting like that we can tell if he is in pain.*

When questioned about non-pharmacological pain management no reference was made to another technique outside of these three approaches, suggesting that there may be knowledge gaps or autonomy issues in nurses exploring these approaches as valid forms of pain management and the level of confidence nurses would have in applying these techniques.

4.5 Adequacy of Pain Assessment Methods Used

Another key theme to emerge from the data analysed was that there were questions relating to the adequacy of the pain assessment methods and their suitability in all establishing effective pain management programmes. This was highlighted by both nurse and patient respondents and involved issues relating to the perceived effectiveness of current assessments, and issues relating to the provision of pain assessment methods.

4.5.1 Perceived Effectiveness of Current Assessments

Open coding of the data revealed that the nurses perceived a general effectiveness of the methods for achieving accurate pain assessments. Themes were developed in terms of the perceived effectiveness of the current assessments and procedures for determining pain and severity of pain for the patients. Common responses were noted, which included (a) perceived effectiveness of assessments; (b) perceived patient satisfaction with the pain assessment and management (4 participants); (c) assessments used in conjunction with doctor's orders to provide adequate pain medication to manage pain in the patients; (d) varying feedback from patients with some happy with the level of assessment and pain management and others requesting more (2 participants), and (e) use of PCA perceived as more effective pain management.

Overall nurses' felt that the system for the current pain management was effective. The assessments nurses made were instrumental in the management of pain as their assessment lead to doctors' providing the necessary medication required managing pain or further assessment by doctors.

> *Actually for post operated, the doctor is writing clearly so whenever they are complaining we will give. So it is okay*. (N1)

The nurse's responsibility for assessing the pain was critical to providing the physician with the information necessary to appropriately treat the pain.

> *Yes, for me for my part it is ok. Because it depends on the patient when we ask the patient and he answer yes there is little pain and we give him paracetamol and the doctor writing paracetamol injection for 24 hours. So that I will give a regular dose that is mild only. If it's severe the doctor know[s] what to give. The doctor will [give] order and we have to carry [it] out*. (N2)

However, when nurse N3 was asked if the pain assessments were effective and enough for pain management, this participant responded, "*I think 60 % it is enough*," when asked in relation to being 100% effective. This suggests that there are clearly improvement needed in pain management in Kuwait as 60% to many other nurses would be nowhere near what an

acceptable level would be. Two participants noted the variance between patients, some being happy with the assessment and management, while others were not happy. For example:

> *Some patient[s] are satisfied with the injection and some patient[s] are [satisfied] if once we give Tramal then they want extra and they will ask when is the next? So, after extra time they will ask and continuously they will ask. First to verbalise their feeling and provide another SOS. First we can give injection and then they will ask for the same injection but we cannot give because it is not needed. (N3)*

Patients were asked about the effectiveness of current pain assessment methods and how nurses responded or managed the feedback that they received. Generally, the use of the pain scale was felt to be an effective and accurate assessment of pain, as perceived by the patient participants. For example, patient 7 noted, "*Yes it is easy to rate the pain and I think it is a good assessment*." However, one patient noted that the pain assessment experience, and specifically the use of the pain scale, when in the hospital in the United States was much better than this experience in Kuwait, as in the USA, the nurses communicated better with the patient, using pictures/faces (from a very happy to a very sad face as used in many other nursing environments) to help the patient determine their level of pain. Patient 9 stated:

> *Patient 9: They set close to me and ask me about the severity of pain by showing me faces to measure my pain, she explained to me exactly what that mean which help me to describe the severity of pain.*

In addition, it was noted that the pain scale was not used in all instances.

Perhaps the critical question asked of the participants was that of their level of satisfaction with the nurse's pain assessment and why. From the data collected from the patient participants, there was evidence of agreement between the patients and the nurses in terms of the lack of standardised pain assessment procedures or protocol. Patients noted that the nurses were very busy and complained of the lack of nurse response. Again this alluded to the issue of nurse to patient numbers which was a key theme that emerged in the nurses' interviews.

> *Patient 7: I don't see the nurse a lot because they are very busy.*
>
> ***Memo 2: The patient was upset at the lack of nurse response, particularly in the evening hours, to his calls for attention. He complained that after pushing the call button, he would often get no response for what seemed like a long period of time.***

He admitted to the understanding that the nurse was very busy, not simply ignoring his request for assistance, however, he felt as a patient, a level of dissatisfaction with the ability to reach the nurse when needed.

Memo 1: The patient described pushing the nurse call button, and the nurse not coming to see the patient for an extended time. This participant complained that the nurses are too busy to provide a rapid response to inquiries about additional pain medication.

This links with the earlier data extracted from the nurse interviews which acknowledges that delays are a problem in nurse response times in the ward – with the nurses themselves indicating that this was a problem with workload and staffing levels in the unit. When discussing pain medication specifically this may also link with the concept of autonomy discussed by the nurses and how this can impact the time taken to reach decisions about patient treatment and pain management protocols. In some instances nurses may be waiting for agreement from the doctor before they can administer medication or review a pain management course. Another patient described not only the delay to respond, but also a lack of caring response when they did come. This participant stated:

Patient 9: They take time to response. Sometime they respond to me after half hour. And sometime they just open the door and ask me for what I need?

This delay in the ability of the nurse to respond to the requests of the patients is an important piece of the level of satisfaction expressed by patient participants. It has linkages to ward type and structure as well as staffing levels the idea that patients feel that they are being cared for. In private rooms, when the 'door is shut' as described above the patients may not be seen or heard by the nurses. At the moment most of the surgical wards are divided into 12 to 15 private rooms and 8 to 10 rooms with 4 beds in each. As a result communication with the patients become essential – and it is vital that when a nurse is called they arrive promptly as they may not have an idea of the severity of the situation. This data also aligns with nurse interview data that suggested workload as a challenge to providing effective pain management. Although the patients expressed some degree of dissatisfaction with the delay in response time of the nurses, the patients also reported being generally satisfied with the nurses' assessment of their pain and their actions to support better pain management when needed.

4.5.2 Providing Pain Management and Medication

After the pain assessment, the nurse checks for the doctor's orders relating to pain medication or will inform the doctor if additional pain medication may be needed. Pain medication was only distributed with doctor's orders. As such, the nurse maintains a critical role as an intermediary between the patient and the physician in providing effective pain management in the postoperative period as it is the nurse that makes the initial assessment which the doctors use to either see patients themselves or recommend treatment based on the nurses assessment, furthermore, the nurses provide direct care to the patient in managing pain through administration of medicines, taking care of patients, e.g. making them comfortable, attending to their other needs. During the initial postoperative period, pain medication is given on a standard basis, as explained by the nurse N1:

> *Post operation, we will not wait and we give pain killer. The order will be there. Yes, we will see the severity of the pain. The first 4 to 5 hours we will give everybody pain killer. Usually post operation patient for 24 hours will be in Tramal or petadine and then they reduce by oral.* (N1)

After the initial postoperative period, the role of the nurse's assessment of the patient's pain becomes essential to providing adequate pain management to the patient.

> *The first 4 to 5 hours we will give everybody pain killer. After that we will check the severity of the pain.* (N1)

The pain medication is dispensed post operatively either by the nurse via injection or orally, or, often with major surgery, the patient is taught how to use the PCA.

> *For major surgery someone will come before the surgery for patient to explain about the PCA and how to use the machine. [Who is that person?] A sister from pain management team. … Only if a major surgery and there is the option after surgery because it is a patient control if he is in pain he can press and then they will get the medicine. And some patient will prefer this method. So if the patient agrees for that the sister will come and explain for him the pain score and how to press and the techniques. And if he is not in that machine the patient should call us and we will give injection and the other thing I told you before like ambulation and deep breathing*

exercise. (N3)

For patients without a PCA, the nurse must be called for assessment and medication. The nurse must first assess the severity of pain and then, if doctor's orders are provided for the patient for additional medication, the nurse is able to provide that medication to the patient. However, the participants noted that if no orders for medication can be found and the patient is complaining of pain, the doctor is called to re-evaluate the pain medications for the patient.

> *We have to assess the patient and we will not call the doctor right away. The staff nurse assess[es] if it is mild or sever [pain] and what is the severity and if it is mild the nurse should be observer. Or even if he is in mild pain and patient cannot tolerate we have to check the prescription whatever the order there and then check the vital signs before giving any analgesic. If we give analgesic and the pain still not relieve after one hour and the patient still feel[s] pain and cannot tolerate then we will call the doctor because pain reliever should be a gap between them and we should inform the doctor [to prescribe drugs] such as Tramal and if he cannot tolerate after one hour we have to inform the doctor. [There is] no protocol that one does after surgery for all patient but based on prescription whatever the order we will give for example Tramal 100 mg.* (N2)

Pain medications are not given as a routine protocol after the first few hours are expired, but require a pain assessment in which the nurse must decide on what the patient needs based on the pain assessment. As discussed previously this may create delays in responding to patients where nurses are waiting on the doctors decisions about pain management after initial assessments are conducted. This would be particularly problematic during evening rounds when there are no doctors present.

> *Not immediately. It depends. Only if the patient verbalise and complain of pain then we will decide. So we are not giving as a protocol we are not giving.* (N2)

This participant went on to explain that providing the pain medication is dependent on the various aspects of their pain assessment as well as the individual characteristics of the patient that contribute to pain tolerance.

No, it depends to the patient response. Sometime the patient cannot tolerate a small pain so that time we give [them] Tramal and patient pain [is] not relieve. So it depends on patient['s] response to the pain analgesic when giving. Sometime patient[s] soon after giving he will sleep and sometime people still feel the pain after giving the Tramal then we have to call the doctor because we cannot give another one within one hour. Like Sickle cell anaemia patient it is very hard. (N2)

This was echoed by participant N1, who also stressed the importance of the requirement of the doctor orders by stating that '*Yes the order will be written, with order we can, if there are no order we will call the doctor but without an order we cannot give*'. Again this relates back to the issue of the lack of professional respect that many patients have for nurses in Kuwait where nurses are still viewed as doctor's handmaidens and are not really viewed as medical professionals. In itself this once again links back to the autonomy of the nurse, and how this apparent sense of disempowerment can impact not only the nurses ability to make decisions about pain assessment and pain management with the patients directly (alluding to the structure of the doctor-nurse game), but also in the attitudes that the patients themselves will eventually adopt. Essentially if a patients sees or hears a nurse opinion devalued, or the nurses not able to present any opinion, then the patients themselves may not consider nurses have any decision-making power – perhaps making them question why this would be the case. As discussed in earlier sections similar patterns have been found in Saudi Arabia where managers and physicians still retain decision-making powers and nurses are seen simply as facilitators of doctor's orders (Al-Ahmadi, 2014).

It is also critical that robust assessment methods are introduced to reduce pain after medication. The nurse needs to serve in a role that provides information to the physician that will support effective pain management for the patient, but also be afforded greater autonomy in developing pain assessment methods and pain management. This should also be further supported by structures which allow nurses to must assess pain continually after providing the pain medication to ensure that pain management is appropriate and is continuing to meet the needs of the patient. The participants noted checking for pain after medication was administered, but also noted, as before, the lack of a standardised protocol for these assessments. To assess the pain severity for patients after administration of pain management, participants described using the assessment tools, but with a focus on asking patients for

feedback in terms of their pain (such as a pain score) and changes in their pain level, as well as checking vital signs, which is done on a regular basis per postoperative protocol. As discussed earlier the respondent N3 outlined the focus on explaining the pain score and utilising this during the pain assessment:

> *So if the patient agrees for that the sister will come and explain for him the pain score and how to press and the techniques. And if he is not in that machine the patient should call us and we will give injection and the other thing I told you before like ambulation and deep breathing exercise.* (N3)

In general most participants mentioned how they incorporated their known pain assessment strategies to assess patient pain after having administered the pain medication. Participant N1 described seeking out verbal feedback from the patient in terms of pain level as well as taking vital signs, to ensure the patient's pulse lowers. "*We will ask the patient how they feel ok. Vitals also the pulse will come down*" (N1). This communication is essential in supporting effective pain management, as decisions regarding the pain management strategy are based on the communication with the patient in addition to the nurse's overall pain assessment, offered to the physician. Participant N3 noted:

> *Yes, after the pain [medication], we will check the patient again. And if we give injection we will ask him after 15 minutes or 20 minutes. For example how is the pain? Is it increasing or decreasing? Can you tolerate? And based in the patient opinion we will take further management.* (N3)

Participant N4 reaffirmed that the pain assessment after administration of pain medication remains similar to early pain assessment in that the nurses do not simply ask the patient for feedback (such as a pain score), but also uses a variety of strategies to obtain an accurate assessment of the patient's current level of pain such as non-verbal elements of pain assessment. The role of the nurse in providing effective pain management is seen as essential to the process by facilitating communication and assessment of the pain from the patient to the physician. Participant N4 asserted:

> *Our assessment very important for the doctor, [as] sometimes they change the dose and sometimes they change the medicine itself.* (N4)

4.6 Barriers in Providing Pain Assessment and Pain Management

Another apparent challenge faced by the nursing staff in attempting to obtain accurate and effective pain assessments was reported as patient attitude and a general disrespect for nurses in terms of their profession. These types of open coded responses formed a new axial coding category related to factors affecting quality of pain assessment.

4.6.1 Workload and Staff Shortages

In terms of the noted challenges to providing quality pain assessment, or the factors affecting quality of pain assessment, nurse participants cited challenges associated with workload (high patient to nurse ratios), communication issues between languages, and a lack of standardised procedures or protocol for pain assessments for nursing staff. The general nurse shortage was discussed by seven of the eight nurse participants as a specific challenge to achieving high quality pain assessment. The nurse participants directly agreed that the nurse to patient ratio was a significant inhibiting factor in quality pain assessments, particularly during the evening or night shifts, where one nurse may be responsible for eight or nine patients. The nurses expressed concerns that this was compromising their ability to provide adequate levels of professional care to the patients (as alluded to below in the responses of N1 and N2) and this is supported by guidance from institutions such as the Royal College of Nursing in the UK that state that a ratio of no more than six patients per nurse is advisable, and that where that ratio exceeds eight patients per nurse patient care on wards is compromise by short staffing (Royal College of Nursing, 2010).

> *Evening shift and night shift one nurse has 8 or 9 patient . . . We need more staff. If we get more staff then the assessment will be more*. (N1)
> *In night shift we have 8 to 9 patient; we have 30 patients and only 4 staff.* (N2)

This was not felt to be as much of a problem during the daytime shifts, when staffing is higher, as was explained by the participant N3.

> *Morning is ok because we have 1 or 2 patient and maximum 3 patients. So, we can approach the patient and we can attend. But afternoon and night more pressure and more hard and sometime emergency coming and we cannot attend and patient calling and we cannot attend soon. (N3)*

To fully understand the challenge associated with staffing shortages or inadequacy to nurses and what this can do to the quality of nursing and pain assessment, the open coding responses of participant N5 were explored.

> *At night shift some nurses have 9 patients in this is the main challenge in our hospital. It is very hard because even we are getting emergency cases and VIP patient. … Very difficult. And nowadays writing for the staff is very difficult so many papers we need to fill and our superior they are coming and checking these papers are filled or not like NCP, health education, I.V fluid chart and nurse notes etc. even afternoon and night if we have patient still in the theatre, the nurse should go and come back and in this time we are facing many problems. And even the visitors are giving us hard time. So, we don't have enough sisters and this is really a problem.* (N5)

This lack of adequate staffing causes patients to go without assistance when they are calling for assistance. Participant N5 continued to explain:

> *They [patients] are complaining because they are telling [us], we are ringing the bell and nobody come. And again why? Because all the sisters are busy. This is normal because if a nurse have nine patients how can she attend all patients [at the] same time. Maybe the nurse will be with the patient in the toilet and the nurse cannot leave the patient and go. Then how she can attend the bell? ... The patient to nurse ratio is the problem and some patients, they don't understand our situation, so they are not satisfied. ... [But] we give priority to the patient who most needs help.* (N5)

Again this was a clear indication in the responses of the participants in this study that they feel that staffing levels are a real problem in this surgical unit. Conversely, however, an argument needs to be explored as to why these problems are not being addressed in the Kuwaiti health care system – are the nurses conveying this message emphatically enough to the appropriate people? In many European nursing systems it is considered that all postoperative patients have the fundamental right for their pain to be well managed by surgical nurses, with the responsibility for monitoring postoperative care plans and the documentation of postoperative pain is the responsibility of the nursing staff themselves (European Society of Regional Anaesthesia and Pain Therapy, 2011, p.30). In the interviews undertaken as part of this research there was little reference to established organisations such

as the Kuwait Nursing Association (KNA) – the only one of its kind in Kuwait – as a mechanism to drive through procedural change and raise issues relating to staffing levels. Instead research has suggested that membership of this organisation is influenced by philosophical and cultural aspects – with the main motivation for joining identified as self-progression (Alotaibi, 2007). Alotaibi's work also found that there were many reasons that nurses in Kuwait would not join this organisation such as the timing of many of its activities in the evening – which is unacceptable for women from conservative Muslim families.

4.6.2 Lack of Autonomy and Disempowerment

Concepts of autonomy and disempowerment were important issues in this work as they indicated that the nurses felt that there was a significant lack of support and a lack of staff in many postoperative situations when dealing with pain assessment. This raises issues as to whether the nurses themselves feel that they may be professionally compromised and if this further re-enforces the idea of disempowerment. The lack of autonomy for nursing staff in Kuwait may be a significant barrier in the nursing staff being able to achieve this goal and this could manifest itself in feelings of disempowerment with the system as a whole – with nurses perhaps feeling that they are unable to change the patterns of nurse to patient levels in this instance.

This problem of autonomy also belies an undercurrent of communication problems between patients and nurses – with nurses feeling that patients did not understand how their workload affected how quickly they could respond, and the patients feeling that the nurses were not the people that should be diagnosing and treating their pain. The feeling from the nurses is that they don't believe that the patients understand the problems that they are facing in terms of nurse to patient ratios or the impacts that these ratio can have on the care provided. This is reflected in the response of N8 who cited patient attitude as having an effect on the nurse-patient relationship and how this was linked to the concept of autonomy and the respect that the nursing profession has in Kuwait.

> *Patient attitude is very challenging for us and sometimes affects the relationship between the nurses and patient. I think it is about the nurses' image. Some people think that we work for them and they don't respect us. We spend more time with them but they show respect to doctor[s]. Because they believe that the doctor is very*

important than us and they have the authority to prescribe medication and they give sick leaves and they make decision, etc. we don't have any authority. (N8)

This need for attention may be a result of the lack of availability of nurses due to high workloads and short staffing, as noted by participants in this study. Regardless of the cause of exaggerated pain reporting by the patients, the nurse participants also described how they are able to assess whether the pain is real and severe. Participant N2 reported using several different pain assessment techniques and not relying solely on patient complaint, while also discussing the pain with the patient to obtain a more accurate patient account and score level:

We will know if he is in severe pain by facial expression and after a while he will call again because he cannot tolerate [it]. It depends also, some people do not know if they are faking because they want only the attention. But seldom will happen like this. Usually if [a] patient is in pain, then we will ask (are you really in pain) because sometime they are telling [us] yes, I'm in pain but he is OK. So, how come if you are in pain, you can walk? (N2)

What appears to be lacking in this response is the focus on compassion and care and how individual experiences of pain differ from patient to patient. There is now real regard here for the subjectivity of pain and a focus on a non-judgemental approach to pain assessment and pain management that the nurses should be undertaking. This concept of demotivation and disempowerment is a key issue in nursing practice and how this may impact pain assessment in the Kuwaiti hospital ward under analysis. What this response shows is a concerning pattern of negative regard for patients, as it is key for nurses to retain a positive regard for patients however disrespectful the patient may be at any one time.

The concept of unconditional positive regard is vitally important in nursing practice. It was first defined by Carl Rodgers in 1961 as the ability to accept another person's beliefs despite your own personal feelings – accepting that each patient's response to health or illness will be reflective of a personal way of adapting to challenges (Rodgers, 1961; Sheldon, 2014). The nurse's reference to ethnicity as an indicator of pain tolerance and also of this apparent breakdown in the nurse-patient relationship as alluded to above can clearly have a negative impact on the nurse's ability to implement the concept of unconditional positive regard and does not seem to go any way towards legitimising the patient's feelings. Where patients feel

de-legitimised they may be unwilling or feel too uncomfortable to share information which could be of importance to their care – in contrast to situations where patients feel legitimised and empowered to freely discuss issues with the nurse. This relates back to the earlier discussion about the issues of communication with leading questions – where they need to be avoided so that the patients themselves feel that they are able to discuss their pain freely and that what they are discussing is being received and understood. This is a key issue in this research as it appears to be lacking in some situations on this particular ward and will impact how the nurse-patient relationship is able to develop and evolve over time through elements of trust and changing perceptions.

These issues can manifest themselves in a nursing community who become disinterested and lack motivation – two key aspects which undermine the nurse's ability to complete the job to the best of their ability. It has been found in Saudi Arabia, for example, that demotivation and disempowerment are resulting in low nursing commitment – evidenced by a high turnover rate of registered nurses, with some studies showing turnover rates in the capital Riyadh of as much as 70% (Al-Said et al., 2004; Habib, 2004). This has led to real nursing shortage is Saudi Arabia and will eventually increase the number of migrant workers required to maintain the overall healthcare system. Similar patterns could persist in the Kuwaiti nursing system and this would further impact nurse training and securing long-term qualified nurses to help establish more robust formal standard operating procedures and secure more autonomy in pain assessment and pain management for the nursing community.

Where nurses feel disempowered there may also be an overall lack of commitment to their organisation (Sheilds and Ward, 2001). In this research it was clear from the nurses responses that there is a level of dissatisfaction with nurse governance, and a perceived lack of control about their own every day practices – with a continued theme emerging from the interviews that the nurses felt that they had very little power or influence. In Saudi Arabia research has found similar patterns and has suggested that it is the managers and physicians who retain much of the power and expect nurses to perform their function with very little discussion or negotiation (Weinstein and Brooks, 2007). This can filter down to the patients themselves – and in a similar sense to the themes emerging about the powerlessness of nurses in Kuwait from this research – the patients will cling to the idea that nurses are simply doctor's assistance whose job is it to make the bed and administer doctor prescribed medication.

4.7 Communication Issues for Nurses and Patients in Pain Assessment and Pain Management

In addition to the issues associated with nurse to patient ratios, another challenge in the Kuwaiti surgical ward was communication issues related to language barriers. This represented another theme in the analysis – in particular reference to the difficulties of communication between English speaking nurses and Arabic speaking patients. The difficulties encountered in these communications make verbal communications regarding pain assessment more difficult, perhaps resulting in an over reliance on nonverbal responses to existing pain. This is detailed in the response of nurse N4 below:

> *The difficulty is communication English and Arabic. And some time cannot verbalise and making sound only. . . . if they don't speak English we bring some nurse who can translate. And if he is making sounds we consider this is pain but we will try to point where is the pain and non-verbal action. Usually they will nod their head. Then they will be happy because at least you recognise there need and what they want.* (N4)

Certainly, patient-nurse communication is easier and more effective when they share the same language, allowing for better pain assessment. Participant N8 described:

> *Most of the nurses are from foreigner country and we have patient from everywhere. For example if I have a patient from Philippine. He or she would like to speak with the nurse who speaks the same language. This is normal since they can speak the same language. … [Interviewer asked: And do you think that they can tell more about their pain if they speak the same language?} … Yes without any doubt. (N8)*

Although the notion of patient awareness is attributed to issues with the patient themselves, nurses can have a positive impact on this particular issue. For example nurses and administrators can attempt to address this particular challenge through providing enhanced preoperative teaching and education for patients. This helps to establish common language and develop an understanding with the patient – ensuring that they are fully aware of the definitions of certain words and the language that will be used throughout the procedure and the postoperative period. Patient attitude, as noted above as often tied to education and awareness, was also described by one of the nurse participants as a challenge that specifically affects the nurse-patient relationship. Participant N8 described how this attitude may stem from a lack of respect for the work nurses do. In addition, research in Kuwait undertaken by

Alhashem et al. (2011) indicated that the communication between patients and physicians was not enough.

> *Patient attitude very challenging for us and sometimes affects the relationship between the nurses and patient. … I think it is about the nurses' image. Some people think that we work for them and they don't respect us. We spend more time with them but they show respect to doctor[s].*

When asked if she believed that having more authority regarding pain medication and management would support greater respect from patients, participant N8 answered, "*Yes, definitely*." This perception of the impact of patient attitude and lack of respect for nurses' roles in pain management was also noted by nurse participant N9, who stated:

> *Many patients especially Kuwaiti patients don't show good respect to us. This is in general. Sometime they ask us to bring some thing or to do something without respect. … Unfortunately, many people have negative views about the nurses. Some of these images came from the media. Some images came from the relationship between the doctor and nurses. You know how doctors just give order to us. Some of them think we are same as hospital porter. (N9)*

This is a critical issue in the surgical unit studied as it suggests that many nurses feel that their own positions do not hold sufficient recognition and authority. The respondents also alluded to the fact that this problem may be perpetuated by the media and, in particular, the doctor nurse relationship. Indeed, it was noted in the responses of participant N10 that when nurses do make notes regarding pain during their pain assessments they do not feel that these notes are even considered by the doctor:

Researcher: *Where do you document the pain assessment?*

Respondent: *Usually in the nurses note. (N10)*

Researcher: *Do you think it will be much better if there is a separate pain assessment sheet?*

Respondent: *Honestly it depends. See, sometime we take vital signs but when the doctor comes he will take himself and not bother to read our record. I observe most doctors ask the patient verbally and never looked at the nurses' note. Some doctors ask us about the patient pain rather than the patient. (N10)*

Researcher: *Why do you think doctors don't read the nurses note or vital signs record?*

Respondent: *Notes no one will read. But vital signs most of them they read it. I don't know. (N10)*

This alludes to the issues first raised in 1967 of the doctor-nurse game where dominant male doctors guided clinical decision-making almost exclusively aided by acquiescent female nurses who were seen to be responsible for housekeeping and patient service (Stein, 1967). In Stein's seminal work nurses were required to be bold, having initiative, and be responsible for making significant recommendations, whilst at the same time retaining passiveness in clinical diagnosis (Stein, 1967). The nurse was also required to ensure that any recommendations that were made appeared to be initiated by the physician.

The doctor-nurse game undermines the autonomy of nurses and results in feelings of disempowerment, whilst still putting pressure on the nurses to be fully competent diagnosticians. Although in many western hospitals this game evolved during the 1990's (when the handmaiden role became resisted and direct advice was offered by nurses – as discussed by MacDonald), there seems to have been no such advancement in the Kuwaiti healthcare system. This is not to say that the doctor-nurse game is not continuing in many hospital settings, but it certainly appears to be highly prevalent in the Kuwaiti nursing system, with nurses continually referencing a lack of autonomy and decision-making powers – reflected by the opinions of many patients who also view the nurses themselves as handmaidens and are view the doctors alone as diagnosticians in pain assessment and pain management processes. This relates to the relationship between doctors and nurses explored by Stein during the 1960s and 1970s and the strategies that nurses employ when they disagree with physicians regarding patient care. Steins work found that nurses utilised more diplomacy through the doctor-nurse game to ensure that the patient care was not compromised and that where they may not receive formal recognition many nurses still felt that as long as the patients received appropriate care then the nurses had done their job effectively (Stein, 1967).

Again, this suggests that there may be issues in the Kuwaiti surgical unit in terms of the relationship between many of the patients and the nurses – with nurses seeming to use their own sense of disempowerment as a basis for delivering poor care – rather than accepting and using the doctor-nurse game to at the very least ensure that patients under their care were being assessment and treated as best as possible. This limits nurse beneficence in terms of

providing good patient care. Where the nurses feel understaffed they are conscious that they may not be meeting their goals in terms of pain management and pain assessment but tend to blame the system and conditions under which they are working. This can manifest itself in negative ways such as when the nurses who took part in the study referenced that patients didn't understand their workload issues. This can lead to problems associated with transference and projection, and eventually result in negative outcomes for the nurse-patient relationship. Where nurses feel overworked and disempowered they referencing that patients do not understand their situation. What is perhaps less considered is that it is not really the patients place to empathise with the nurse. Indeed the patient should not accept below average care as a result of workload in these environments, but should instead expect the healthcare system (and the nurses themselves) to ensure that adequate levels of care and pain assessment are provided.

Another barrier identified by the nurse respondents in pain assessment and pain management was an apparent propensity of some patients to exaggerate the level of pain that they were experiencing – making it difficult for many nurses to make accurate pain assessments. This is an important issue with the nurse responses, because it does not consider that pain is subjective. Indeed, this is in contrast to the seminal research of McCaffrey and Beebe which indicates that 'pain is whatever the experiencing person says it is, existing whenever the experiencing person says it does' (McCaffrey and Beebe, 1994). This is a very important point because this idea that pain is whatever the patient says they are experiencing is not something which is addressed by any of the nurses throughout the interviews undertaken. In terms of the ethics of pain management nurses need to consider the inherent subjectivity of pain and understand that pain is often a private, internal event that cannot be directly observed – but has to be built upon a persons' self-report (Lewandowski et al., 2005). Indeed, research does indicate that due to the subjective nature of pain, the expression of pain is inextricably linked to language and the meaning of language.

In some instances using language to express pain not only states the existence of pain but also describes its nature and also can, in some instances, can become a part of the pain experience itself (Waddie, 1996; Lewandowski et al., 2005). In the early 1970s, Melzack and Torgerson (1971) produced a seminal work that recognised that a focus on a single dimension to assess and understand and a person's pain experience (such as through the use of pain intensity

scores) as insufficient and failed to capture the complexity of pain. Instead Melzack and Torgerson (1971) suggested that the language of pain could provide a more meaningful way to assess the multidimensional nature of the pain experience. In this thesis the subjectivity of language was not really explored by the nurses or the patients, suggesting that complexity of pain was not comprehensively explored. Instead results from the open coding of statements made during the participant interviews revealed that the nurses acknowledged the perception that patients sometimes exaggerate pain, likely a result of the individual differences in pain tolerance.

Themes related to this notion revealed that the nurses still report the pain number given by the patient, even if they believe it to be exaggerated, and that they can distinguish between actual high levels of pain and pain exaggeration through use of different assessment techniques (other than the pain scale), such as ability to ambulate, facial expressions, vitals, and the type of surgery (whether this aligns with the level of pain experiencing). The nurse participants reported perceptions of patients who exaggerated pain, which they felt was primarily due to the need for attention. For example, one participant explained, "*Yes, I have seen patient like that because they want to seek our attention*" (N1). Similarly, Participant N6 reported this perceived need for attention:

> *Some need attention. Or they want the doctor to come and visit them. Sometime we are very busy in the ward and they feel they are [being] ignored. (N6)*

This attitude again does not consider the work of researchers such as McCaffrey and Beebe (1994) in determining that whatever the patient is saying pain is subjective and what the person experiencing pain says about their own pain is what should be treated.

4.8 Perceptions and Assumptions of Pain

One of the key theories to emerge from this work was that many of the nurses working in the Kuwaiti hospital ward seemed to assess pain whilst retaining their on perceptions and assumptions about what pain the patient may be in. In this research the interview data revealed that although the nurse participants commonly noted the normalcy of pain complaint in the postoperative period (*"It is expected to have pain after surgery"* [N5]), the level of postoperative pain and complaint behaviours was revealed as perceived by the nurses to be dependent on the type of surgery, personal pain tolerance of the patient, and the patient's

unique response to medication. Participants N2, N3, and N4 described how the type and severity of the surgery affects the severity of pain experienced by the patient as well as the patient tolerance for dealing with pain. During the axial coding exercise this category was revealed in terms of the individual factors that affect patient pain perceptions.

> *It depends according to the surgery…and according to the tolerance of the patient. If, it is mild surgery then we can't specify the timing of complaining [of] pain. If it's a big surgery then they will suffer more pain. And if it's a minor surgery some patient[s] tolerating as much as they can while other need management for their pain.* (N3)

> *The pain depends on what type of surgery patient has [had]. Even though if it's a minor surgery, but if it is anal, pain will be very painful. Those patients most frequently, they will ask for painkiller. And of course the major abdominal surgery. Sometime it depends on the patient.* (N4)

> *It depends on the severity and the operation was done to him if it's major operation for example laparotomy. And sometime patient[s] come with PCA, Pain control anaesthesia.* (N2)

In comparing responses through axial coding and in searching for meaning from the responses of participants to the specific example of postoperative pain, the key aspects of those responses seem to combine to form a perception of pain as an intolerance for the sensations or feelings. Patient interview data also demonstrated a high level of commonality of responses, as participants tended to respond in very similar ways in reporting of the lack of response of nurses, but a general sense of adequacy of pain assessment when used. Patients demonstrated great similarity in terms of recognition of pain as causing discomfort and intolerable sensations. This is described in Memo 2 from the patient data below.

> *Memo 2: The patient attempted to express his perception of pain, describing pain as ranging from a sense of being uncomfortable and not being able to get comfortable, to something that is intolerable. This latter remark resembles the nurses' descriptions*

of pain as intolerable and also seems to inherently reflect the notion of individual pain tolerance.

These perceptions are linked pain through the sensations which are often experienced in the postoperative period – attributed to an injury or surgery which is significant enough to interrupt activities of living and sleeping. This is similar to the results which were found in the research of Leegaard et al. (2010) who also found that that pain in postoperative situations often disrupts many of the patient's normal activities. It was commonly noted amongst the respondents, for example, that pain is intolerance for a sensation. For example, Participant N3 suggested, "*Pain means we can't tolerate the sensation[s]"* being experienced. Similarly, Participant N4 described intolerance to a sensation, but also noted that this sensitivity (pain) is significant enough to disrupt normal activities: "*Pain is that [the] patient can't tolerate [the sensation] and pain is something that will disturb his activities.*" Patient pain complaints and tolerance also were described as affected by the patient's individual response to the medication. Participant N2 continued explaining:

It depends to the patient['s] response. Sometime the patient cannot tolerate a small pain so that time we give Tramal and patient pain not relieve. So it depends on patient response to the pain analgesic when giving. Sometime patient soon after giving, he will sleep and sometime people still feel the pain after giving the Tramal. (N2)

4.8.1 The Gate Control Theory of Pain and Pain Assessment in Kuwait

Building from the data relating to nurse perceptions of pain it was interesting to note that, in general, there was a focus on the concept of tolerance – with nurses seeming to suggest that they would have an idea of the amount of pain a patient should expect to be in (if they looked at the type of surgery for example). Overall the nurse responses were not inclusive of references to the widely applied Gate Control Theory of Pain proposed by Melzack and Wall (1965). This limits the theoretical framework which should be adopted by nurses in postoperative situations in properly addressing how both human thoughts and emotions can affect pain perception. According to Melzack's Gate control theory, pain is 'not just a physiological response to tissue damage but also includes behavioural and emotional responses expected and accepted by one cultural group which may influence the perception of pain' (Abdalrahim, 2009, p.10). As a result pain becomes a psychological issue linked with suffering, and some researchers have suggested that certain psychological modulators of pain

sensitivity are dependent on the patient's own individual characteristics (Jones and Zachariae, 2004).

The responses obtained from the nurses in this study did not reference this concept and although there was reference to the idea that pain differed from individual to individual, it did not seem to be directly referenced to how people feel pain. For example, pain is referred to in the above extracts as related to tolerance or the type of surgery which took place, rather than how individuals themselves feel pain. For example would this patient not be afforded stronger pain relief, or would they be treated as troublesome by the nurses themselves? Again this suggests that the nurses working in this particular unit are not considering the theories put forward by McCaffery (1968) and more recent work by McCaffery and Pasero (2002) and Abdalrahim (2009) which determine that the subjective nature of pain ensures that the patient, not the health care provider, has the authority on pain, and it is their own self-report which will be the most reliable indicator of pain.

This notion of the subjectivity of pain and how this is considered by the nurses working in the Kuwaiti hospital is explored later in relation to the cultural aspects of pain management in Egyptian patients. This same issue, however, also raises questions as to whether the nurses interviewed in this study considered that levels of pain experienced by an individual differ from person to person – not just the type of pain. In many cases the pain levels may seem from personal experience as not particularly problematic or something which would be low on the pain scale – but to that individual they may be experiencing relatively high levels of pain and suffering. The Gate Control Theory of Pain suggests that pain involves a variety of psychological aspects (i.e. cognitive, sensory and emotional) on top of the physiological aspects of pain (Melzack and Wall, 1965). Thus, when a nurse comments that a patient has a low pain threshold or a low tolerance for pain, there should be questions about how this may impact pain management.

4.8.2 The Unique and Individual Nature of Pain Tolerance

Pain tolerance of the individual also was discussed by the participants during this research, revealing that the individual pain tolerance additionally may be affected by demographic factors, such as culture/nationality, education, age, and gender. This was an issue discussed in Khan et al. (2011) who found that cognitive and psychological factors play a significant role

in the severity of reported post-surgical pain. Building on the research of Khan et al. (2011), the open coding exercise undertaken during this research revealed concepts of perceived individual difference in pain tolerance among patients could be further refined by distinct social groupings such as nationality, age, and education, and gender. Participants described the individual nature of pain perceptions as:

> *Some person[s] they will tolerate the pain. Some person[s] very often they complain and some people want to be in sedate. Mild pain sometime they can tolerate and some patient can't tolerate.* (N1)
>
> *In my opinion it's according to the person['s] tolerating capacity. Some are suffering a lot and some are very sensitive.* (N3)
>
> *Each patient has different tolerance to pain.* (N4)

Again the nurses made reference to tolerance levels and the patient's tolerance to pain and tolerance differences between patients concerning pain, and there was also recognition that not all patients will experience pain in the same way. These differences outlined by the nurses, and also the differences suggested by the patients themselves, suggests in the research findings that there is a unique and individual nature to pain tolerance and that this needs to be an important aspect of effective pain assessment and pain management strategies such as more focus on the Gate Control Theory, and consideration for more of the psychological influences on pain. Indeed, it was considered that external factors may directly influence the patient's notions of suffering such as whether they were being treated in a private room. If a patient is being treated in a private room they may feel more comfortable in moving around and using the bathroom – in shared facilities patients may feel more embarrassment causing more discomfort which could manifest as suffering and eventually pain.

4.8.3 Cultural Differences in Pain Assessment

Prior research has shown that cultural values, in terms of behavioural and attitudinal norms, influence postoperative pain (Bates and Rankin-Hill, 20002; Lasch, 2002; International Association for the Study of Pain, 1994). Bates and Rankin-Hill found, for example, that there was a distinct relationship between the patient's locus of control and ethnic or cultural background and that this resulted in cultural identity variations in reports of pain intensity. Bates and Rankin-Hill identified this by comparing patients from New England and Puerto Rico, however similar patterns of cultural differences in pain and pain control amongst

patients have been discovered elsewhere. For example, the research of Farber Post et al. (1996) underlines the importance of cultural issues in aspects of self-assessment in pain and patient autonomy. This research states that in many instances 'Western values often clash with world-views held by non-Western cultures that may place greater emphasis on spirituality, family and community, or authority and social stratification' (Farber Post et al., 1996, p.353).

The above research by Farber Post et al. (1996) suggests that what may provide comfort to those of different cultures and cultural backgrounds may be able to influence patient suffering and, as a result, how much pain the patient feels. This is further supported by the findings of this study, which has identified that nurses do consider there to be cultural differences in patient's experiences of pain. This was one of the key theories to emerge from the work, and links with the issues of disempowerment and a formal pain assessment criteria which will be discussed later. These two issues are linked with the cultural theories behind pain because although nurses acknowledge that they have preconceptions about pain, there is no process in place to ensure that this does not affect their processes of pain assessment and pain management. That is not to suggest that pain management should be based on solutions for pain exclusive of medicinal solutions, but that certain cultural ideas may help if developed as part of a pain management programme. Indeed Farber et al. (1996) also found that a heavy reliance on self-reporting undermined the subtle differences between cultures and how this influences how different people view the very meanings of health, illness, and healing are shaped.

The research of Farber et al. (1996, p.353) surmises that 'sensitivity to these distinctions encourages critical thinking about how they affect medical care discussions and decisions, as well as the experience and expression of illness, disability, and discomfort—issues that form the essential background for considerations of pain control'. This is supported by the work of Karlsson and Lundebo (2010) who assert that many cultures may regard pain as a natural part of life compared with others – where it may be viewed as something unnatural that has to be eliminated. In this research half of the ten nurse interview participants discussed nationality and/or cultural differences in pain tolerance. This was an interesting aspect of the study, as this particular pattern of pain assessment (in viewing different cultures and ethnic groups as having different pain tolerances) is not widely considered from the perspective of the nurses

themselves in much of the literature on postoperative pain. In this research study participants reported perceptions that Egyptian patients in particular were felt to be more sensitive to pain. A few examples from the open coding of the interview text demonstrate these statements by participants.

> *Egyptian, I think their pain threshold is less but not all.* (N2)
> *For nationality, in my opinion, usually and the comments about Egyptian that they are very sensitive to pain, in my experience not all but some need more pain management. If it is less pain they will act like it is more.* (N3)
> *Actually we see some nationality like Egyptian and we call it Egyptian syndrome. Even small surgery or prick they will scream. We have some staff from Egypt and they say most of us like that with small pain they cannot tolerate*. (N5)

This focus from many of the nurses that there are assumptions that those patients of an Egyptian heritage will have a lower tolerance for pain is very revealing as it suggests that nurse pain assessment in Kuwait is sometimes based on what they think is being experienced by particular patients – particularly where there is reference to these patients 'acting' like they are in more pain (as suggested in the conversations undertaken with N3 and N5). In the Kuwaiti hospital systems this may be reflective of wider cultural concerns as alluded to in the work of Khan et al. (2011) discussed during the literature review. Khan discusses aspects of pain catastrophising as an associated effect of psychological factors such as beliefs about pain and how this can cause other conditions of suffering such as anxiety and depression and an increase the patients' perception of pain (Khan et al., 2011). Indeed Khan's research suggests that in many worst case scenarios this can lead physical disability when left unmanaged and can contribute to the development of chronic pain in many patients (Khan et al., 2011). It was also interesting to note that research undertaken by Vlaar et al. (2007) used a cross-section of Egyptian patients to discuss pain intensity between Mediterranean and Western European cultures and identified an Egyptian population within this study group as reporting significantly worse pain and physical function as a result of higher disease activity than those from other regions.

This finding, and the emphasis on certain cultures acting like they are in more pain, is perhaps a concerning feature of the findings of this work and addresses the concerns of Khan

et al.'s 2011 study that in certain countries interventions for pain may not yet be as effective as they should be – and that addressing pain levels is not always consistent. There is little reference from the nurse respondents that the psychological factors of pain are a contributing factor to people's experiences of pain, and how this relates to existing research and its applicability to pain assessment techniques and pain management strategies. Thus, although the nurses are aware that Egyptian's catastrophise pain (because they acknowledge that the pain is there), there has been little thought given as to why Egyptian's may experience pain catastrophising symptoms and whether this is true for all patients of Egyptian heritage. This seemed to be a cultural norm rather than evidenced from past experience, as the nurses did not reference any specific examples of where Egyptian's had potentially demonstrated low pain tolerance in the postoperative environment. As only one of the ten patients interviewed in this work was of Egyptian heritage it was not considered that sufficient evidence could be extracted to address patterns of pain tolerance. The literature review, however, indicated that race and background can affect how patients are treated, and this was evidenced in this work (as detailed in the work of Lasch, 2002).

4.8.4 Age Differences in Pain Assessment

The findings of this research suggest that age may be an important consideration in pain management and pain assessment with some nurses feeling that younger patients showed more resilience to pain than the elderly. Although this does seem to be an obvious and predictable outcome, no published data is available to show the effects and this research represents an insight into the formal recognition of this practice in the nursing profession. All patients need careful and tailored pain management but more so in the elderly both physically and pharmacologically, especially after surgery to lower the risk of comorbidities do tend to have increased comorbidities and therefore likely to have a higher chance of developing complications compared with someone who is younger and fitter (Kozian et al., 2015). One of the key themes of this research was that both the patients and nurses interviewed acknowledged that although all patients feel pain, how they react to it and how this needs to be managed varies from patient to patient.

The research of Satija et al. (2014) demonstrates that even in the younger patient population, there is still a need to address issues in effective pain management. Pain management in younger population is significantly aided by the presence of a multi-disciplinary team with

effective communication skills (Satija et al., 2014), and the use of a multi-disciplinary team and effective communication skills should not be limited to just one patient group, but should be available to all patients for the successful management of pain. This would be an important consideration for effective nurse training and for promoting more autonomy in the nursing profession. This can be assessed through individual needs rather than clustering patients into groups and assuming one rule fits all in the group. Research suggests the use of multimodal preventive and treatment techniques (e.g. combination of psychosocial, pharmacological and non-pharmacological management) to reduce chronic postoperative pain and dependency on analgesics, with local variations where necessary (Auret and Schug, 2013; Salama-Hanna and Chen, 2013).

In terms of age, participants generally reported that younger patients were felt to have a higher pain tolerance compared to older patients (as shown in the example of respondents N2 and N3 below) – however this was again related to the wider influence of culture during the nurse interviews when age was addressed with respondent N3. Prior research conducted by Ip et al. (2009) supported a higher risk of pain and need for more postoperative pain management among younger people compare to older persons. In this study, Participant N2 described, *"Age also. Some younger adult can tolerate more"* (N2). This age difference in pain tolerance was also noted among the Egyptian population, which was identified by the nurses as being a nationality with a lower general tolerance. Participant N3 stated, "*Nationality only these Egyptian according to the age younger can tolerate more*" (N3). This suggested that there may be a perception amongst nurses that the younger demographic can tolerate more pain, which may result in them receiving a less intensive programme of pain management – however there was a clear focus on the cultural differences rather than simply a focus on age as the key aspect of pain experience. This is an important element of the research, particularly compared to the research of Satija et al. (2014) who demonstrated that even in younger patient populations there is a real need to address effective pain management. Again, however it was noted that without prompt the nurse in their response seemed to allude to cultural issues with pain management in dealing with patients of Egyptian heritage.

The above data suggests that there are preconceptions with the pain assessments of Egyptian patients that may not be actioned on an individual case-by-case basis. The lack of a required

qualification and limited formal training programmes and knowledge sharing activities, however, may mean that nurses are continually relying on previous experience and reputation to make their own judgements in certain scenarios. This may also relate to theories and issues around the levels of autonomy that nurses feel that they have in treating patients and structuring appropriate pain management and pain assessment strategies and incorporating cultural elements into these programmes. In this nursing ward this could include more training in the theories of pain and how this may impact people from different cultures in different ways – establishing that, for example, those of Egyptian heritage may appear to have lower pain tolerances, but will still be experiencing pain and that pain needs to be managed accordingly.

4.8.5 Education/Knowledge Differences in Pain Assessment

Another demographic factor that affected pain tolerance was education and this was an important element of research for the Kuwaiti hospital setting. This is important not only in educating nurses about how they can recognise pain, but also in educating patients themselves. Previous research has confirmed that educating patients on pain – in terms of what to expect and how to manage it can support a greater tolerance for chronic pain though strategies such as pain physiology education sessions (Meeus et al., 2010) – can be an effect element of pain management and pain assessments themselves. Indeed, in this current study, three participants discussed the effect of the patient's education and knowledge and how this may affect pain tolerance. Participant responses to questions regarding challenges to or factors affecting the ability of nurses to provide quality and effective pain assessments suggested the perception that patient awareness, education regarding pain, the procedure or process, and attitudes play a key role in pain management, tolerance, and assessment. Participant N8 described, "*Usually educated people can understand more about pain*," and therefore, contributed to more effective pain assessment and management. In contrast, patients who lack this type of education or awareness may be more aggressive and problematic (non-cooperative), resulting in less effective pain assessment and management, as noted by Participant N7, who provided a more detailed explanation:

> *Patient awareness is very important. Some patient is educated and aware of the procedures will not cause a trouble. … Yes, all patients who are aware of the procedure and educated [about the expectation of surgery and the pain as a side effect] don't cause any problem. The patients who are not educated usually get*

aggressive and ask many questions that already they should know. They don't even cooperate sometimes. … In general, educated people know about the post operation pain and they tolerate better than the others. They are less anxious or worried about their pain. On the other hand, we usually hear negative things [from those lacking education or awareness] such as "If I know how much this is painful I wouldn't do the surgery" or "why I'm still having a pain after surgery". And it is really challenging to convince them that the surgery was done successfully and everything is ok and this is temporary pain and it will go. (N7)

One participant used the example of his/her own surgical experience to demonstrate how education and knowledge can affect the tolerance for pain and the use of medication. Participant N4 stated:

Last time when I had my surgery and I had caesarean and after I was quiet only and then the doctor came to me and said, "Why you did not ask for any painkiller" I told him because I know this is a normal thing. So I think tolerance is based [on] education and can affect the tolerance. (N4)

Similarly, Participant N5 also described how education and knowledge can affect pain tolerance in terms of the use of painkillers:

Education and knowledge can effect if they know that they are doing a major surgery and some of them know the side effect[s] of painkiller[s] and try to avoid. (N5)

It is interesting to note that these participants placed this notion of increased tolerance to pain on the use of less medication and perhaps less complaining. These patients may indeed feel a similar sensation of pain, but seem to choose to refocus away from the pain. It seems that a patients' education and knowledge about what to expect from a medical procedure with regard to pain, allows the patient to distract themselves from the pain they are suffering and perhaps feel less impact from it. As the pain they suffer is not unexpected, patients are able to tolerate it better possibly through less anxiety and mental amplification of pain - because those who have more education or knowledge of pain may recognise certain feelings which suggest pain or may not have as much confusion about what they are experiencing – i.e. they may be expecting to feel or experience certain things. This was shown in research conducted by Rimer et al. (1987) who demonstrated through a randomised clinical trial that patient's

pain control could be improved in cancer related illnesses through a planned patient education programme.

The work of Rimer was further supported by the work of Lovell et al. (2014) who found that patient education was effective in identifying and improving pain outcomes and cancer pain management. This is linked to the notion of self-reporting pain because those who have more education or knowledge of pain may recognise certain feelings which suggest pain or may not have as much confusion about what they are experiencing – i.e. they may be expecting to feel or experience certain things. This is one of the most critical elements of pain assessment and one of the most reliable indicators of pain (as discussed in Herr et al., 2006). When a patient is aware of the signs of pain through more effective education to improve patient knowledge, they are more comforted and less stressed by the symptoms as they may be aware that pain relief will be effective once prescribed and can also report pain symptoms with greater accuracy.

In terms of education it was also important that reference is made to how the patients viewed the nurse's role in pain assessment and pain management and how they view the nurses role in postoperative care, pain assessment and pain management. It was found in this research that one patient refused the nurse's attempt at assessing pain, describing the belief that assessment and management of pain was not the nurse's job, but rather that of the physician and therefore, saw no need for the nurse assessment of the pain (as shown below).

> *Patient 8: I don't think this is the nurses' job and I think the nurse cannot give me the analgesic. I don't believe that the nurse is competent to do that because their role is known in the public that she [is] to take care of vital signs and bed making and administer some medication. So their task is very basic. I believe only the doctors are able to manage my pain. For example nurses cannot do anything without the doctor['s] permission.*

Despite this most patients sought to call the nurse for pain management despite the fact that they don't seem to respect them in assessing pain – suggesting that if more autonomy were given to nurses then a better nurse-patient relationship could be developed. Again this suggests that there are significant communication issues evident in the Kuwaiti surgical unit

which may impact the quality of pain assessment and pain management. Where some of the patients indicate that they did not believe it was the nurse's responsibility to assess pain (as suggested in the response of Patient 8) the issue of autonomy and powerlessness again comes to the fore. In this regard, some of the elements of powerlessness nurses feel that were touched upon in earlier sections are not due to a lack of professional competence and may not be linked to motivation, but could be down to a basic lack of awareness and the absence of an sort of enabling system or structure. Nurses need to be empowered by doctors and the wider medical profession so that they are able to gain the confidence of the patients in delivering postoperative care.

This response linked well to the data obtained from the nurse interviews which suggested that nurses feel that they have no respect from the patients they are treating. Despite these two patient perceptions, among those who reported nurse assessments of pain postoperatively, the nurse assessments were described as including the nurse asking the patient about their pain, use of the pain scale to assess level of pain, taking vital signs, and noticing from the facial expressions and sounds made by patients that pain was severe. For example, the patients described the following:

> *Patient 6: She said, "How is your pain? Do you have severe pain?"*
> *Patient 7: I think she noticed from my face and maybe I was making sounds which obviously mean that I'm in pain. She asked me about the severity and to rate 0 to 10. I told her 9. Then she gave me a painkiller and told me that I will feel better shortly and she will come to reassess my pain again.*
> *Patient 10: She [nurse] took my vital signs and asks me to rate my pain.*

If education is likely to encourage more autonomy, it is also important to educate patients as to the role of nurses in pain assessment and pain management, otherwise it is likely that similar barriers are encountered.

4.8.6 Gender Differences in Pain Assessment

Lastly, women were described as having a lower pain tolerance by one female participant, with participant N1 stating that "*female complain more than male"*. Specifically related to pain assessment and pain management in postoperative environments, the research discussed earlier by Brunner (2009), Leegaard et al. (2010), and Parry et al. (2010) found women to

have a lower pain threshold, to experience higher pain intensity, and more fear compared to men. Although it may be interpreted as an indicator that gender issues are key to pain management, it could also be considered that this factor remains linked with cultural values, and the issue of nationality which seemed to be perhaps the key issue which is isolated in this work. This research adds more data to the work of Racine et al. (2012) who found that in a decade of laboratory research into gender differences in pain experience there remains no real clear and consistent pattern in pain tolerance and experience.

The work of Racine et al. (2012) looked at 172 published articles between 1998 and 2008 and through a systematic review it was found contrasting results according to the type of pain that was under examination. Their review concluded that females and males have comparable thresholds for cold and ischemic pain but that females tolerate less thermal (heat, cold) and pressure pain (Racine et al., 2012). In the majority of studies, however, research has not succeeded in producing a clear and consistent pattern of sex differences in human pain sensitivity (Racine et al., 2012). As a result, and due to the limited data which was extracted in this work in relation to the gender issue in pain assessment (having just one key reference to this throughout the interviews), it was considered that the cultural elements identified in this work may be of more importance to the respondents and how these may influence pain assessment and ultimately pain management programmes.

CHAPTER 5 – DISCUSSION OF KEY FINDINGS

This chapter will introduce discussion of the key findings of this work and how it relates to the fundamental theories and findings of this thesis. This will begin with a brief overview of the rationale and key themes, before exploring each of the key discussion points in turn.

5.1 Rationale and Key Themes

Research by Apfelbaum et al. (2003) indicated that the proper management of pain can have an impact on the ability of postoperative patients to recover. Building upon this argument Brunner et al. (2009) and Carr et al. (2010) have found evidence to suggest that inadequate and suboptimal pain management is common and has led to harmful complications for patients in postoperative situations. This is evidenced in further research which has found poor pain management manifesting as complications in patients including delayed wound healing, deep vein thrombosis, atelectasis, increase in length of hospital stay, progression to chronic post-surgical pain, and even death (Francis and Fitzpatrick, 2013; Wood, 2010; Marmo and Fowler, 2010). The nurse's role is crucial in assessing postoperative pain amongst patients who have undergone surgery (Apfelbaum et al., 2003). The key themes identified and extracted from the data will be discussed in more detail through this chapter. In particular this chapter will explore some of the negative practices which have been identified in the thesis and how these can be categorised, and hopefully how they can start to be addressed.

5.2 Nurse – Patient Communication Barriers

5.2.1 Communication Issues Relating to Language

Building on the findings of this research, it seems clear that communication barriers are another key factor in the management of pain in this research. Many of the nurses in Kuwait were recruited from abroad and speak little Arabic. As a result of staffing issues in Kuwait most nurses are recruited from abroad. Most nurses' main language of communication is English though not necessarily from a native English speaking country, whilst most of the patients would speak Arabic. The language barrier causes frustration among patients and nurses as they are not able to communicate properly thus risking compromising care. Published qualitative data from Iran shows communication problems between patient and

nurses led to job dissatisfaction mainly due to workload tension created as a result of the poor communication and decreased staff motivation (Shafipour, 2014).

This also fed into the stigma that patients already had of nurses and their role, and added mistrust in competency (Shafipour et al., 2014). Furthermore, the researchers suggested that improvements in communication between nurses and patients would help in managing surgical patients Shafipour et al. (2014). Kargar et al. (2014) carried out a large cross-sectional study to show that most communication barriers from patients' viewpoint evolved from heavy workload of the nurses, age, gender and language difference between patients and nurses; majority of which was also highlighted by this research. Kargar et al. (2014) concluded that in order to achieve care that is effective and responsive to the needs of patients these overcome barriers especially in communication is required; and support needs to be provided to nurses to communicate therapeutically with patients. Although this research did not provide any direct evidence relating to how nurses and patients interacted with each-other (in terms of direct observations), it was clear from the interviews carried out that in some instances, this interaction had been met with negative assertions from either side. This could occur either with nurses not believing that patients' self-assessment was accurate and hence not important in pain assessment or with patients not having confidence that nurses are dealing with their pain adequately – or even that nurses should not be dealing with these issues in the first place.

One way to get around this situation is to make it mandatory for nurses to speak basic Arabic to be able to extract medical information and make assessments and also to help them to build more common ground and rapport with the majority of the patients that they are dealing with. Rather than implementing it as a requirement for recruitment as this approach may affect recruitment, providing on the job training may counteract any of these effects and actually encourage more foreign nurses into the role as it is a valuable skill for the CV that can be acquired for promotion and other roles, or increase the chance of securing a job in another Arab speaking country if required. Speaking additional languages is always seen favourably on CVs, and should be promoted in this manner during the nursing recruitment process. No evidence was seen during the course of this research that this is being done. Another way to resolve this issue is to have translated material or translators available on wards. The picture cards and scoring system suggested above by nurses and patients would also serve to

overcome this barrier. The positive aspect of having nurses from a variety of different countries is that if there are non-Arabic speaking patients it may be easier to find a nurse who is able speak the required language to act as translator to allow better communication.

5.2.2 Communication linked to nurse empowerment

In Arabic nations, nursing as an occupation, is seen as a low grade job socially and nurses are not treated with similar respect shown to doctors (Al-Kandari and Ajao, 1998). Al-Kandari and Ajao (1998) discuss that two main barriers exist in recruiting natives into nursing profession, one - lack of social support and lack of information about nursing. Furthermore retention of staff and students was affected by social pressure, poor staff welfare and academic issues (Al-Kandari and Ajao, 1998). There were suggestions on how to improve this situation which included awareness programs, career guidance and better policy on staff welfare (Al-Kandari and Ajao, 1998). In Saudi Arabia the introduction of minimum qualification requirements for nursing is helping to improve staff retention. In Kuwait this may help to create similar patterns of staff retention and also increase the numbers of Kuwaiti nationals who would want to move in to nursing – reducing the reliance on a migrant workforce, as the migrant workforce can create issues associated with both verbal communication and language and also potentially through how communication is affected by a lack of knowledge.

Nurses say that patients do not understand the role of nurses or their situation and their workloads and how this limits their ability to respond to issues quickly. Better communication would certainly build nurse-patient relationship through informal conversation. Many studies have shown that effective communication between patient and nurses to deliver patient-centred care is essential in delivering good quality care and a breakdown in communication may compromise care (Moore and Reynolds, 2013; Savage, 2013, Bolster and Manias, 2010; Nilsen et al., 2014). Despite this, nurses are often not trained in communication skills, despite research showing that poor communication can often be one of the main reasons for patients complaining about their care (Bongale and Young, 2013). If Kuwati nurses were better able to communicate with patients, during the start of care nurses could explain the process better, for example, how often nurses are likely to check on patients, when they are not able to and explain why – that is, there may be a patient more in need therefore the time to answer the bell call would be longer and this is not because nurses

are ignoring the patients. Nurses would be able to explain briefly issues that can arise during the course of the recovery and stay, explain that mild pain is expected and is a part of the process. This sort of dialogue may help patients be more empathetic towards nurses making their jobs easier and nurses less apathetic (Shafipour et al., 2014).

5.2.3 Effective Nurse-Patient Communication

Better communication may help reduce unnecessary anxiety and stress in patients and may reduce hospital stay. This has already been demonstrated successfully in other areas of medicine where it has been shown that effective communication on treatment and expectations from healthcare provider can help reduce anxiety and is a cost effective way to increase the quality of care provided to patients (Zarea et al., 2014; Tazegul et al., 2015; Acuff et al., 2014). Pain sensitivity can be modified by anxiety with high level of anxiety sensitising patients to pain (Kaunisto et al., 2013) further supporting the need to reduce patient anxiety in the management of pain. Indeed, one nurse (N4) pointed out that patients were happy when they were being understood and better communication serves this purpose thus supporting the need to investigation solutions to the above problem. Again this helps to reinforce the idea that patients are being understood – and that their own notions of pain are being recognised. For effective nurse-patient communication nurses do need to consider how they can ensure that patients not only feel comfortable communicating their pain, but also that nurses take the time to ensure that they understand what patients are saying in relation to their pain.

5.3 Cultural and Social Issues Effecting Pain Assessment in Kuwait

The responses of surgical nurses in postoperative pain assessment has highlighted various issues and challenges that nurses in Kuwait face from cultural differences as well as resources issues. This is a key issue as it suggests that there may be knowledge gaps for the Kuwaiti nursing system in terms of understanding the cultural impacts of pain management from both the nurse and patient perspectives. This is shown in this research by the apparent lack of reference by nurses to how pain is simply what patient's state it is – and that this needs to be the critical basis of pain assessment and pain management. Overall, the findings of this study shows that nurses were generally aware of and knowledgeable regarding pain assessment and management, that they knew of the gaps in practice despite the opposing opinions of some

patients in interviews and has identified several factors which can help patients and nurses in managing and treating pain post-surgery.

Another key finding in this study was that nurses felt nationality and educational background played a critical role in the way patients perceived pain and how they responded to it. Egyptian patients were singled out as being an ethnicity with low pain tolerance. What was concerning in the research, and something which did not appear as a pattern in much of the literature analysed ,was that appears to be some cultural issues in addressing pain management and elements of pain assessment in the Kuwaiti hospital – particularly in reference to the pain management and pain assessment methods for those patients of Egyptian heritage. This supports research by studies which have shown that race and background can affect how patients are treated (Lasch, 2002), but is not discussed in-depth for the Kuwaiti-Egyptian cultural scenarios which have been identified in this research.

This opinion by Kuwaiti nurses may affect how they treat these patients; for example do they anticipate low tolerability therefore administer more treatment and/or pay particular attention to them; conversely will nurses prefer to undermanage these patients, that is, pay less attention to them on the assumption of over exaggeration and focus on more needy patients. If there is a tendency for one patient to play the 'victim', nurses need to perhaps consider why this is – and treat the root cause of that problem, rather than simply assuming that patients are exaggerating pain or are not experiencing as much pain as the nurses assume. Again this links back to the nurse-patient relationship and how nurses try to encourage more honest dialogue and more trust between themselves and the patients that they are treating.

The findings of this research suggest that nurses do approach the pain management of Egyptian patients in a different manner than those from other ethnic or cultural backgrounds. Once again this could potentially lead to issues in inconsistent pain management due to the apparent lack of a robust standard operating procedure for pain assessment which should be carried out on all patients in postoperative situations. What this research demonstrates is that nurses are already using assessment methods of their own to filter out information to make accurate assessment of pain where over-exaggeration is suspected. For example questioning patients regarding activities that can be performed despite being in chronic pain (e.g. how can a patient walk if they are in severe pain), or assessing vitals, or site of surgery to check if this correlates with the described level of pain. The nurses essentially need to better integrate all

the signs of pain and relate these back to what the patients themselves are describing and what the nurses are observing. All three of these factors will have different levels of importance for different patients and need to be assessed together to make sure that pain assessment are accurate and that the pain management methods adopted as a consequence are appropriate.

Gender issues were also addressed in this research; however no key patterns were extracted from the data during analysis. Despite some research suggesting women complain of pain more than men post-operation (Brunner, 2009; Leegaard et al. 2010; and Parry et al. 2010), with the exception of one nurse, this was not highlighted as recurring theme or a clear issue in Kuwaiti patients. This seems consistent with the research on gender and pain management which provides some inconsistencies in the results of pain threshold levels. For example Brunner (2009), Leeggaard et al. (2010) and Parry et al. (2010) found that women have lower pain threshold levels, higher pain intensity, experience more pain unpleasantness, and more fear when compared to male patients. In contrast Racine et al. (2012) undertook a literature review of gender issues and pain threshold between 1998 and 2008 found comparable pain thresholds for some forms of pain amongst females and males and concluded that there were no robust or consistent patterns of sex differences in human pain sensitivity.

5.4 Education in Pain Assessment and Pain Management

One of the key issues in this work was the checking of vital signs and making multiple assessments allowed the nurses to monitor other factors which may not be so obvious; for example, the early signs of the development of adverse events such as allergies which can be picked up by assessing temperature, blood pressure, the look of the patient upon visits, etc. – all of which were signs of pain mentioned by the nurses interviewed. The data shows nurses were educated enough in their field (pain management of surgical patients) to know side effects of medication such as the decrease in blood pressure following administration of painkillers and to keep a watch on these patients and highly competent to perform their jobs despite some of the opinions of the patients who felt nurses did not have a significant role in their care and doctors have all the knowledge and power to help them with their pain management and recovery.

Essentially this thesis has established that nurses have a basic knowledge of pain assessment through their education, but that this is not promoted through continued education and by encouraging nurses to further their knowledge. This is not confined to simply establishing basic education requirement to become a nurse (although this is a sound basis for achieving more knowledge in nursing), but in acknowledging that nursing education is a dynamic process. In much literature a consistent theme is that through all the changes which have been found in nursing education, the best way to advocate more education in nursing is the presence of nursing leaders who will diligently investigate the state of nursing education and also advocate for reforms to improve the delivery of health care through quality nursing education (Scheckel, 2009).

What was less apparent in terms of an emergent theory from this thesis was that there was no formal training structure to educate nurses about non-pharmacological approaches to pain management and how this may benefit people from different cultures. Non-pharmacological methods employed by nurses to help reduce pain included psychological support, early ambulation, comfortable position, distraction, deep breathing, and patient education and communication. The role of the nurse in assessing patient pain was seen as essential to facilitating adequate pain management through regular communication with patients and assessment of pain of patients, and providing communication to the physician. Despite this, there remained strong evidence that there were communication issues in the nurse-patient and nurse-doctor relationships. Again returning to the patterns in the nurses responses regarding the different cultural influences on pain (in the views that Egyptian patients have lower pain tolerance), there must again be an increased recognition that there are different approaches to pain assessment and pain management which can be based on different cultural factors. In a postoperative environment medical drugs remain a critical part of treating the somatic (physiological and emotional) dimensions of pain, however non-pharmacological therapies can help to treat the affective, cognitive, behavioural and socio-cultural dimensions of the pain (as discussed in Demir, 2012).

There were also patterns found in educated versus non-educated patients where nurses felt educated people expected less interventions and tolerated pain better due to prior knowledge or understanding of procedures and the anticipation that surgery will result in some inevitable pain. This reflects issues with communication and avenues for informing and educating

patients about pain management and pain assessment. This has been demonstrated in research undertaken in Saudi Arabia which showed how nurses manage pain showed that nurses were overlooking these patients who were tolerant of pain and not managing them properly (Eid et al., 2014). This may be mirrored in the Kuwaiti healthcare system and affect the quality of care provided to patients. Indeed, recent research in the Middle East shows that populations requiring particular attention and focus are those from diverse ethnic backgrounds, those who need assistance with language and those with low literacy rate (Silbermann et al., 2015).

Another issue to consider is that too much focus may be provided on the more educated population of patients as model patients and over compensate? Educating nurses on possible areas of bias in treatment or management would be beneficial as education of nurses is directly related to patient care and mortality (Aiken et al., 2014). One of the key themes for nurses was that there were continued issues with notions of powerlessness and the inability of nurses to effectively define their own futures and relationships within the nursing profession. This was demonstrated in frustration from nurses in the way that they felt they were perceived by doctors and patients and in elements of mistrust towards nurses from the patients themselves. For example one of the nurse's responses stated that doctors just give orders rather than entering any form of discussion with the nurse. In this instance the result was that the nurse believed that they were viewed in the same regard as hospital porters by the doctors in the surgical unit – compounding feels of disempowerment for the nurses. This can create frustration in nurses and this was perhaps demonstrated in a response which indicated that certain patients exaggerate pain and elicit nurse time just for attention.

5.5 Protocols for Assessing Pain and Pain Management Techniques

It was found during the research that nurses adopted various techniques for assessing pain were used among the sample, which included patient complaint verbalisation and reported pain score, facial expressions, vital signs, checking the site of wound or site of pain, ability to ambulate, and ability to sleep comfortably. The nurses felt that pain assessments should be included with the standard vital signs, which would increase the frequency of the assessment and provide enhanced assessment and management of pain. Nurses also were insightful, when it came to pain and type of surgery. Whilst they did expect major operation to result in a patient suffering from more pain and ask for interventions, for example, painkillers, they were also aware that small surgery associated with smaller incisions such as anal surgery

would could just as much pain as surgery associated with larger incisions. This demonstrates a clear understanding of nurses in assessing pain and familiarity with surgical procedures as expected from nurses in the field and in line with expectation of training, education and competency of nurses.

The research also demonstrates that nurses made assessments even when patients could not be assessed, that is, when they were sleeping; patients were still monitored through checking of pulse and simply by the nurse visiting them. As demonstrated in *memo 2*, there appears to be evidence of correlation between the understanding and classification of pain between patients and nurses so that they are consistent in their descriptions of the level and tolerance of pain. Pain assessments were reported to be documented in the nurses' notes or on the PCA sheet when appropriate. Challenges to providing effective pain assessment and factors affecting quality of the pain assessment were felt to include nursing workload (patient to nurse ratio), communication difficulties (language differences), lack of assessment protocol (need for regular procedures and frequency of assessment), and patient exaggeration of pain (and how to identify).

A key issue highlighted by both patients and nurses was the lack of use of established pain assessment tools. This research indicated that nurses may not be so sure of the adequacy and consistency of the methods they are using. Another trend seen is that both nurses and patients were suggesting solutions for the gap in pain management. The suggestions are worth exploring and developing as they are directly coming from the frontline users and 'consumers' of the process to try and improve the nurse-patient relationship and reinforce the idea of delivering more effective communication structures. Suggestions from patients included the use of picture cards to pinpoint pain level. Nurses suggest standardised protocols which can reduce ambiguity and make the collected data comparable between patients; with such approaches, regional modification would need to be considered, for example, translated material. Nurses in this study have their own way of assessing pain; for example through assessment of facial expression, correlating this with the type of surgery, checking the site of wound for signs that may be contributing to the pain and link these with the data from vital signs in the absence of a standard protocol. This means there was room for variation between staff in what they check and how they grade them.

During this research it was that some nurses were able to check all of the above; however some nurses may only check some of the assessments mentioned before making a decision as to the most appropriate course of pain management. When assessing pain, different nurses use different methods. For example, if patients were drowsy following administration of analgesic, nurses will not disturb the patients but will check later at a suitable time. This 'suitable time' varied between nurses and a standardised process would allow for reduction in variability and better monitoring. The use of tailored standardised pain assessment tools have been shown to work well in the management of pain especially where there was an issue with patient-nurse communication such as in this research area (Reavey et al., 2014) with pain scores dropping dramatically following introduction of standardised assessment tool. Typically, nurses said they visited patients around every two hours. Research shows that regular visits of patients between 1-2 hours improved patient satisfaction and may help improve nurse-patient relationship which is turn could positively affect quality of medical care (Negarandeh et al., 2014).

This research also found that overall nurses held the belief that it was the patient that was best able to score their pain and nurses often used questions such as is the pain light or painful, these questions without a scale and wholly dependent on a patients self-reporting. Depending on how they are interpreted, the treatment is then prescribed, meaning for the same problem, different patients could be given different treatment when this is not necessary, for example, paracetamol may be sufficient to treat pain however due to over-exaggeration one patient may be given co-codamol or morphine compared with anther in exactly the same pain which is an unnecessary cost and puts patient at risk of side-effects. It is accepted that different patients experience pain differently; however, other factors such as vitals should be used to decide what type of treatment should be given. This supports the idea that this particular ward would benefit greatly from the development and implementation of a pain management protocol.

Furthermore, other factors may influence the interpretation. For example, if the nurses already have a preconception about Egyptian patients prone to over exaggerating pain, intentionally or unintentionally nurses may not document the results of the pain assessment accurately so that heavy pain may be document as lighter pain thus affecting treatment. Scoring systems such as those used in Hospital Anxiety and Depression Scale (HADS) may

be a useful reference point for developing an internal system for scoring pain. Currently no such established and trusted system for scoring pain exists. Reports exist of considerable number of pain assessment tools, but the main problem with using these was that there was limited information available on their validity reliability and usefulness in clinical setting therefore there are no recommended validated pain assessment tools for use currently (Lichtner et al., 2014). What is important to note is that some researchers have suggested such a system may not work in every clinical setting, such as where there are resource and training issues (Bellieni et al., 2014).

This poses a problem as another finding in this research is that nurses feel they were unable to give the patients the desired attention due to staffing shortage. Many complained of having to manage too many patients especially at night due to shortage of nurse and the patient to nurse ratio being high. Nurses admit that sometimes assessments and complaints are overlooked due to shortage of time and having to deal with too many patients in one go, majority say they are looking after between 8-9 patients frequently especially at night there is a shortage of nurses, which is high and would like this number to be reduced to around half.

This is key information that should be given serious thought as several recent studies have shown that the number of nursing staff per patient is critical in determining patient mortality and in-hospital stay so that fewer patient per nurses decreases patient mortality rate and reduces the number days patients spent in hospital as in-patients (Sasichay-Akkadechanunt et al., 2003; Kane et al., 2007; Aiken et al., 2014). Increasing nursing staff may balance out the cost of the nursing staff in the long run by reducing the cost associated with treating patients who stay longer due to improper care and management (Sasichay-Akkadechanunt et al., 2003; Kane et al., 2007; Aiken et al., 2014). This is similar to the research of Al-Khandari and Thomas (2009) in their study of task completion amongst nurses in Kuwaiti general hospitals. Al-Khandari and Thomas (2009) found that nurses were only able to complete tasks such as comfort talk with patients, and the maintenance of documentation when the nurse-patient load was less than 5.

Despite the suggestion that workload is the key issue, the UK has recently published evaluation on what should be the expected nurse-patient ratio to allow optimum care and recommended the use of clinical tools to assess various factors such as experience of nurses,

dependency and care needs of patients, availability of other health care staff among others, in determining what is the acceptable level of staffing per ward (NICE, 2014a), The ratios seen in this study is comparable to UK statistics where inpatient wards see an average of 8 patients per nurse during the day time and around 11 patients per nurse during night shifts (NICE, 2014b). The decision to publish a new tool for assessing the number of patients per nurse in UK hospitals which can significantly reduce the ratio to 1:1 care or on average ratios between 1:7 and 1:13 nurses per patient (in low risk units or where there are high grade nurses) is designed to improve patient care and safety. Similar tools can be used to assess the acceptable ratio of nurse to patient in Kuwait to provide better care to demonstrate the current staffing levels seem in line with those of the UK and perhaps the issues lie in internal efficiencies which could be improved upon.

5.6 Notions of Empowerment and Disempowerment

Many of the key barriers the nurses identified in pain assessment and pain management appeared to relate to issues around empowerment and autonomy. One of the key themes identified during the nurse interviews was that nurses feel that there is a lack of professional respect in the doctor-nurse relationship and this can impact the way in which the patients themselves view the nurses and the role that they have. It is important to consider this topic as one of the key themes emerging from this research, as autonomy and good nursing practices are often indelibly linked. Indeed research from other academics has shown that there is a definite disparity between a nurses' desired and perceived autonomy and the ability that they have to control many aspects of their daily job activities (Attree, 2005). This apparent lack of control in many instances has been shown to interfere with nurses' attempts to perform according to their expectations as professionals and may contribute to disengagement and withdrawal from the profession of nursing (Attree, 2005). Parallel to this is the national view of nursing in Saudi culture. In Saudi Arabia a lot of research has been conducted in relation to the notion of disempowerment amongst Kuwaiti nurses (Ammer, 2001). Indeed, many articles have been published which suggest that nurses not only have a sense of disempowerment in Saudi Arabia, but that they also suffer from feelings of uncertainty which can also have a negative effect on nursing systems (Ammer. 2001).

Disempowerment can also contribute to notions of uncertainty in nursing and this is an important issue as evidence has shown that conditions which foster a sense of empowerment

in healthcare settings are vitally important to both patient and employee wellbeing and organizational success (Mandefrot, 2003). Encouraging a greater sense of empowerment amongst nurses can help to ensure that nurses are no longer viewed simply as assistances to doctors and that their role is inclusive of more elements of the scientific basis of nursing. Encouraging more empowerment within the Kuwaiti healthcare system will also offer greater opportunities for development in the nursing community and can help many experienced nurses take a more active role in the operational decision-making processes. This can also help nurses to have more feelings of self-worth and meaningfulness leading to greater job satisfaction and improve morale and can encourage more retention in the nursing profession and strengthen the professional image of the nursing profession as a whole – something which would itself help to improve the healthcare system on a wider level.

From the patients perspective there is concern that nurses are not assessing pain correctly, and also that pain assessment is not the role of the nurse – but is a process which should be carried out by doctors. This seems to be problematic in the Kuwaiti healthcare system, because it has established an apparent breakdown in the effectiveness and trust of relationships between health professionals and patients. This study has indicated that this may manifest itself in scenarios where patients are de-legitimised and creates a culture of distrust amongst patients and staff – referencing words such as exaggeration when talking about patient pain, or even certain cultures, and with patients considering that the nurses who are completing pain assessments are not qualified to do so. Patients did understand that nurses were very busy when they were not responding to patient calls or making regular visits though this did not stop the complaints from patients. Some patients said that nurses are not doing enough but some are trying, which could be due to lack of empathy with the nurses and the image of nurses in Kuwait. Patients even understood that nurses were overloaded with work. Nurses said they could not pay the desired attention to their allocated patients due to increased administrative responsibilities and lack of staff.

Although patients may be not appreciate the value and role of nurses in Kuwait, the study illustrated that nurses were understood and recognised the psychological and physical aspect of pain and its management. For example nurses detailed the importance of looking at non-verbal signs of pain, and the patients themselves detailed how non-verbal pain assessment methods were used by the nurses. Despite this focus it was also found during this research

that the nurses' main method of making assessment continued to be the direct questioning of patients. As communication was seen as a key tool in building nurse-patient relationship as the research highlighted that in Arab nations it is important to continue to facilitate communication between patients and nurses. At the moment the relationship is weak due to cultural and social barriers and the lack of understanding as to how the doctor-nurse game can be better utilised to the benefit of patient care.

The research obtained in this research shows that in many instances patient interviews often reflect the findings of nurse's interviews. Essentially this relates issues of autonomy and empowerment for nurses within the Kuwaiti healthcare system and is influencing the effectiveness of pain assessments as effective pain management can only be achieved if there is a real understanding of pain as a subjective experience and that effective treatment needs to consider the patient themselves as well as the issue or incident. Although it is clear that there are power issues and a real lack of effective autonomy for nurses, it is not productive to simply blame the system. In accordance the European Society of Regional Anaesthesia and Pain Therapy, (2011) the responsibility for establishing a pain assessment protocol and ensuring that this is followed in each incidence is the responsibility of nursing practitioners themselves and resource issues shouldn't prevent effective pain assessment.

To try and deliver these changes and encourage more autonomy and greater power for nurses' consideration should be placed on recruiting nurses with degree level education or equivalent as such level of education equips nurses with the decision-making skills needed to make strategic decisions in the service and transformation of the health care. Saudi Arabia has recently followed in the footstep of the UK, USA, Australian and Canada and introduced a policy making degree or equivalent a minimum qualification requirement for nursing. If the policy works in neighbouring Saudi Arabia with a similar culture and demographics (in terms of international mix of population) it is possible that it may work in Kuwait. Graduates are more likely to show problem-solving skills, assume leadership roles and see the 'bigger picture' of the patient healthcare pathway which is important in a society where the health need is evolving, e.g. new/emerging threats requiring critical thinking, and problem-solving skills (American Association of Colleges of Nursing, 2013). Degree-educated nurses use skills acquired through their education to deliver an efficient and effective service. Nurses are able to use evidence-based approaches to meet the needs of the evolving healthcare system.

Lack of education in the nursing staff is a hindrance in providing high quality of nursing care to the patients who need advanced level of nursing care (Al-Ahmadi, 2014). In the data obtained in this research in the surgical unit in a Kuwaiti hospital found that the education levels of the nurses fluctuated and also the experiences of the nurses were very different – particularly due to the large numbers of foreign nurses in Kuwait.

5.7 Conditional Positive Regard and Pain Perception

One of the starting points for this research was to understand if the nurses understood the concept of pain from a patients' perspective. The interviews have shown that nurses in Kuwait are able to understand pain from a physical and psychological point of view in understanding how pain and pain tolerance can vary from patient to patient. Patients' perception of pain varies from individual to individual and this research shows this can be one of the reasons which can pose a problem nurses accurately managing pain in Kuwaiti hospitals. Indeed the research suggested that even in instances of mild pain, which nurses may have thought of less significant when it comes to variability, there are wide variations in tolerability.

The research which was undertaken has demonstrated that when nurses assessed pain they were aware of some of the key aspects of pain assessment such as the type of surgery the patient had undergone. In addition the nurses also alluded to the fact that the description of the pain by the patients needed to correlate with the vitals of that patient, the type of surgery a patient has undergone and other signs such as facial expression, and results of wound examination among others. Whilst they did expect major operation to result in a patient suffering from more pain and ask for interventions, for example, painkillers, they were also aware that small surgery associated with smaller incisions such as anal surgery would could just as much pain as surgery associated with larger incisions. This demonstrates a clear understanding of nurses in assessing pain and familiarity with surgical procedures as expected from nurses in the field and in line with expectation of training, education and competency of nurses. The research also demonstrates that nurses made assessments even when patients could not be assessed, that is, when they were sleeping; patients were still monitored through checking of pulse and simply by the nurse visiting them. As demonstrated in *memo 2*, there appears to be evidence of correlation between the understanding and

classification of pain between patients and nurses so that they are consistent in their descriptions of the level and tolerance of pain.

Furthermore, the checking of vital signs and making multiple assessments allowed the nurses to monitor other factors which may not be so obvious, for example, the early signs of the development of adverse events such as allergies which can be picked up by assessing temperature, blood pressure, the look of the patient upon visits, etc. The data shows nurses were educated enough in their field (pain management of surgical patients) to know side effects of medication such as the decrease in blood pressure following administration of painkillers and to keep a watch on these patients and highly competent to perform their jobs despite some of the opinions of the patients who felt nurses did not have a significant role in their care and doctors have all the knowledge and power to help them with their pain management and recovery. Important in this theme however was that nurses seemed to make interpretations about the level of pain experienced by the patient in terms of intolerance. In many of the nurses responses pain was perceived as an intolerance for the sensation brought about by injury or illness.

Some of the interview data obtained seemed to focus on what level of pain a patient could tolerate – with one respondent detailing that some patients may not be able to tolerate even small levels of pain (as detailed in the extract with respondent N2 below). This could manifest itself in different ways in pain management and professional practice as some nurses may not consider pain as a subjective experience if they are referring to the type of surgery as a tool in assessing pain (as detailed in the above text from respondent N3). This supports the work of van Dijk et al. (2010) who studied numerical pain scores in postoperative scenarios and found that some care providers and patients differ in their interpretation of postoperative pain scores – leading to risks associated with overtreatment. This research also suggests that the interpretation of tolerance and the expectations of pain after surgery may lead to under treatment of certain patients. This was an interesting theory which emerged from the data as it suggests that there are preconceptions which some of the nurses in the Kuwaiti hospital are referencing in relation to postoperative pain assessment.

> *It depends to the patient['s] response. Sometime the patient cannot tolerate a small pain so that time we give Tramal and patient pain not relieve. So it depends on patient*

response to the pain analgesic when giving. Sometime patient soon after giving, he will sleep and sometime people still feel the pain after giving the Tramal. (N2)

Despite these the findings of this research did also show that nurses did say that even when they were aware of over exaggeration by certain patients, the nurses would record the information given by the patients in their notes. Often, however, it was shown that the doctors did not read these notes, and the nurses may view this as a reason to assume that these notes do not hold any real value – again resulting in feelings of disempowerment. This suggests that some patients are being listened to and personal feelings are being considered, however the opinions of nurses were not being considered by the doctors fully when looking at devising pain management strategies – often just speaking to the nurses rather than the patients directly about what the pain experienced is. This is a management and policy issue and may require further training for nurses to interpret such situations to make more accurate notes and recommendations and making sure that the doctors understand that this is where the details are going to be recorded and that this is where the various aspects of the pain assessment and the interpretations of the pain assessment are also detailed. For example a patient over exaggerating pain, whose pain assessment is recorded verbatim, may be given unnecessarily stronger medication which has costs and side-effects associated with it. The nurses really need to re-focus the doctors away from nurse-doctor discussions in front of the patient, to encouraging nurse-doctor-patient discussions which are conducted in accordance and with reference to the nurse's patient notes.

The ability to accept another person's beliefs despite your own personal feelings. Each patient's response to health or illness is a personal way of adapting the challenges. This suggests that the nurses do not always believe patients' descriptions of the pain they are in – perhaps explaining why patients may not always respect the nurses and question their ability to make effective pain assessments and to implement a pain management strategy that best meets the patients' requirements. This relates to the issues of the unconditional positive regard which does not appear to have been properly examined in this particular nursing ward. Instead of treating each patient individually and acknowledging that pain perception and pain experience will differ from patient to patient, the nurses instead continue to refer to differing pain tolerance as a function of culture and even, in some cases, or patients seeking attention. Far less regard is given as to why these patients may be asking for attention, and to some of

the fundamental nursing theories such as the gate control theory of pain and how this may influence a person's experience of pain and should influence how pain is assessed and managed.

To address the concept of pain perception comprehensively nurses would need to consider the literature which details how inherently complex the notion of pain is across the various physiology, cognition, social and emotional complexes (Manias et al., 2002; Carr et al., 2010). Although the nurses felt that the factors which affected pain were inclusive of the type of surgery (severity of the injury), personal pain tolerance (also affected by demographic variables), and patient response to medications at the moment there does not seem to be a comprehensive knowledge of the theories behind the subjective nature of pain. For example the Gate Control Theory of Pain is not really discussed in terms of its importance in many aspects of pain management as well as in pain assessment. For example, as the gate-control theory helps to understand the role of psychological factors in the perception of pain the theory can also be developed to outline potential non-prescriptive interventions for alleviating pain such as distraction and imagery in relieving pain (Abdalrahim, 2009).

The findings during this research support the work of DiCenso (2005) who outlined that nurses have a key role to play in postoperative pain management – but that this needs to be conducted irrespective of their own personal experience of pain and based on a working knowledge of how pain differs from person to person This lack of focus on pain theory may be compounded by the disempowerment of nurses in the Kuwaiti healthcare system and the lack of requirements for formal qualification. If nurses were required to undertake formal qualifications in nursing practice theories such as the Gate Control theory on pain could be assessed in more detail and discussed as part of a formal training programme into the academic theories concerning pain assessment and pain management.

5.8 Nurse Autonomy, Concepts of Power and the Persistence of the Doctor-Nurse Game

Previously, it was mentioned that nurses felt they were not respected by patients. This was a social issue (Al-Kandari and Ajao, 1998); one patient also pointed out that this was also in part due the lack of autonomy that nurses have. The patient said that nurses could not do anything without a doctor's orders and therefore had reduced value in their care pathway as it was the doctor that managed their pain. The patients' views were that nurses were simply there as basic helpers to make beds, give medication to patients, and it is the doctor that has

all the capacity to do anything relating to a patients care and recovery, which of course is a misconception as many studies have shown that care provided by nurses can affect patient outcome (Kane et al., 2007; Aiken et al., 2014; Negarandeh et al., 2014; Brunner et al., 2009; Carr et al., 2010; Francis and Fitzpatrick, 2013; Wood, 2010; Marmo and Fowler, 2010). Kane et al. (2007) found that higher registered nurse staffing was with less hospital-related mortality, failure to rescue, cardiac arrest, hospital acquired pneumonia, and other adverse events. Supporting this evidence was obtained by Francis and Fitzpatrick (2013) to suggest that nurse's knowledge of pain management and ability to implement appropriate pain management was critically important, with their data from the US finding that the inadequate relief of postoperative pain can contribute to postoperative complications such as atelectasis, deep vein thrombosis, and delayed wound healing.

In this research it was found that some patients thought the nurses were not competent and such perception undoubtedly would affect relationship. Giving nurses more autonomy through a wider scope of professional practice could help alleviate this problem and further help build therapeutic relationships (see discussion below). Allowing nurses to administer simple medication like paracetamol according to a set guideline and protocols, make recommendations on treatment (which can be approved by doctors but perhaps conversations should take place out of sight from patients) can tackle this problem. UK leads the way in the area of non-medical prescribing – e.g. nurses, pharmacists and allied healthcare specialists being able to prescribe certain drugs following training. The arrangement has worked well in the UK and could be extended to Kuwait. Nurses prescribing medicines has been received will by patients in multiple hospital departments without treatment or care being affected (Black and Dawood, 2014; Carberry et al., 2013), A qualitative study found the main barrier for nurses in prescribing was anxiety and lack of confidence in prescribing which could be dealt with by higher learning status and education of nurses (Weglicki et al., 2015). The recommendation could be easily met by changing policy to recruit graduate nurses as a minimum (or equivalent) as suggested above. It is important, however, that some consideration is given as to how this impacts recruitment levels. To overcome this problem in the nursing units it is possible that graduate courses could be implemented as part of the training structure for nurses in Kuwait – to try and encourage more professional respect through a more formal qualification and also to try and discourage the current high turnover rates of nurses in many Arabic countries.

One patient highlighted that pain management by nurses in the United States was different to the Kuwait experience because the nurse asked more questions, gave them pain killers and took other actions such as getting ice packs etc. This comment has strengthened the suggestion that nurses need to introduce more effective communication strategies with their patients. This also indicates that nurses and patients would benefit from more nurse autonomy as clearly this particular patient felt comfortable with the nurse undertaking pain assessment and providing medication in the United States – something which is not necessarily viewed as acceptable practice amongst nurses working in the Kuwaiti healthcare system. This notion of differing levels of autonomy is discussed in McDonald (2014) who found that failure to control pain effectively occurred when health care providers were not clear on treatment and when there was conflict between patients and health care workers in how the delegation of pain assessment and treatment, and that improving patient-provider communication may help in pain management – in this case, nurses communicating with patients in various modes whether this is in a nurturing role, a friendly role, autonomous or in a psychologically coaching role may help vastly.

Nurses felt that the media and also doctors giving orders and showing superiority in front of patients added to the negative image patients had of nurses and their role in the patients care. Culturally in Kuwait all of these issues could be partly dealt with by taking the doctor-nurse conversations away from the patient's bedside and away from the patients as previously suggested. Government campaigns to promote the value of nursing and the critical role it plays in the hospital infrastructure and patient care would be useful. A study shows that when Kuwaiti high school students were question about nursing as a career only 19% of students would consider it (Al-Kandari and Lew, 2005). With regard to giving nurses more autonomy, indeed, nurse led clinics where nurses have more autonomy have been shown to be successful across multiple countries in various areas compared to consultant led clinics (Osborne et al., 2010; Dean et al., 2014;) and shows no impact on cost (Nicholson et al., 2013). In particular, Williams et al. (2013) showed that in a thoracic surgery ward, 99% of patients were highly satisfied with nurse led care with protocols in place for nurses. 65% of patients were not required to be seen by a doctor and only 7% of patients believed that being seen by a doctor would have been beneficial proving that a nurse led post-surgery unit should work successfully. McFarlane et al. (2012) showed that in nurse-led colorectal surgical clinics,

post-surgery patient management and survival rates were comparable to consultant follow up rates and advocate the need for more nurse led units.

5.9 Nursing Responsibilities and Administration Roles

Patients complained that the level of care was worse at night when after bell call they would wait a long time before they were attended to. Nurses also said that they were the busiest at night when there was a staff shortage and they couldn't attend to everyone in the desired time frame. This is an issue that is beyond the scope of the nurses to manage and needs addressing by management so that nurses and patients do not suffer needlessly. The Kuwait Trade Union Federation is responsible for all workers in Kuwait, it is also a third party in the International Labor Organization (ILO), and is currently addressing the lack of rights for migrant workers such as vast majority of the nurses. The above issue of nursing staff level and how this represents Kuwait's healthcare system to the international community as well the quality of care it provides to its population needs to be brought up with the general secretary. As vast majority of the nurses are foreigners, not dealing with the issue could have detrimental effect on Kuwait's healthcare system.

As a possible solution to this, research has shown that the ability of various grades and functional healthcare workers to work as a team to cover wards with good communication between them limits adverse events in patients, improves patient outcomes, and decreases average length of in-patient stay (Epstein, 2014); it also helps reduce hospital cost, increases healthcare workers performance and creates greater job satisfaction. In Kuwaiti surgical units administrative workers could help nurses with their administrative roles which would free up nurse time to spend on the care of patients. Studies have already shown that low cost training of healthcare staff can be effective in providing support to patients by a range of healthcare worker through pocket cards, and guidance documents (Rosenbluth et al., 2011). As mentioned previously, the level of education of nurses could have a significant impact on quality of care provided; hiring nurses with graduate level education or equivalent can improve the quality of care provided. Aiken et al. (2003) showed that an increase of 10% in the proportion of nurses holding a bachelor's degree resulted in a decrease of 5% in the mortality rate within 30 days of admission. Obviously such a policy may have an effect on recruitment but there needs to be an assessment of benefits of such a requirement to recruitment and overall health care provided in Kuwait prior to proceeding.

5.10 Education of Nurses in Pain Management

Previously, it has already been mentioned that if nurses were trained to speak basic Arabic following recruitment, or training given to allow for more autonomy in the care of patients, it would help nurses manage their patients better and also help improve the relationship between nurses and patients. Aiken et al. (2014; 2003) have shown that educating nurses to bachelor's level can significantly improve patient outcomes in surgical wards. Their international study showed a 10% increase in degree level education of nurses decreased mortality rate by 5% even when caring for an average of 8 patients; similar to the workload of the nurses interviewed for this research. Therefore the excessive workload would contribute less on poor patient outcome and by simply educating nurses to degree level patient care may improve (Qadire and Khalaileh, 2014; Nematollahi and Isaac, 2012; el-Sanabary, 1993). Indeed some Arabic countries, such as Saudi Arabia, are already on the way to making degree level education mandatory and supporting nurses in providing them with high level education to change the nursing profession in a society that had little care for the role (Miller-Rosser et al., 2006).

This suggestion would also serve to enhance the outcome of any nurse-led clinics and enable nurses to take on a more autonomous role. It is also important that students and nurses start to play a more active role in their own learning and that there is more proactive dialogue between teachers and students to encourage more mutual trust, respect and understanding for the content and processes involved in the preparation of nursing students for contemporary nursing practice (as discussed in Scheckel's discussion of nursing education 2009). The findings above on the areas of strengths and weaknesses of the nurses and the healthcare system and addressing the at least some of the suggestions would allow surgical nurses to be able to develop mastery on monitoring patients' postoperative status; assessing patients' postoperative pain; understanding and believing the patient's pain and documenting the pain accurately; identifying the source of the pain; planning appropriate care plan based on the assessments; administering prescribed analgesia effectively; monitoring and evaluating efficacy of pain relief; and ensuring good pain control and an individualised treatment (Mahfudh, 2011; Ubino, 2003; Buckley, 2000).

5.11 Patient Data – Opinions of Pain Assessment and Pain Management

Patient interviews showed a trend in the data collected i.e. patients repeatedly asserted similar data demonstrating common themes especially around the doctor-nurse-patient relationships and hierarchy. Patients described pain in terms of discomfort and the inability to get comfortable as well as intolerance for the sensation. The patients offered insight into their personal pain tolerance, their expectations for pain management, and responsiveness of nursing staff. Despite the patient complaints with regard to slow response time when pushing the nurse call button to report pain, the patients generally expressed perceptions of effective pain assessments given by nurses once they responded to the call, and appropriate action taken by the nurses in addressing their pain It was interesting to note that the nurses and patients both alluded to difficulties in communicating with each other throughout pain assessment and pain management. In the interviews the researcher encountered no such issues with the patients who were happy to discuss their experiences. This may be reflective of trust issues in the nurse-patient dynamic, and patients feeling that they cannot give direct feedback. The erosion of trust in these situations is concerning as this is vital in providing good postoperative care and effective pain management appropriate to each individual.

In general nurse and patient perceptions have influenced the expectations and delivery of postoperative pain assessment, pain management and wider issues relating to care provision in Kuwait. Communication remains ineffective between the two, and the doctor-nurse relationship does not appear to be used in the most effective way for the benefit of the patients they are treating. These issues have been further compounded by nurse's professional and social status in Kuwait, where nurses feel disempowered and unable to effect change. These issues have resulted in conditional relationships emerging throughout the healthcare system which have further re-enforced the levels of frustration and dissatisfaction felt by both nurses and patients. To change this cycle nurses in Kuwait need to start to understand how they can effect change, and establish structures through which they are able to influence decision-makers. The focus of their frustration is often applied to the idea that doctors are seen as the primary decision-makers within the healthcare system and amongst the patients themselves. What seems less considered by the nurses interviewed in this thesis is that these patterns are persistent the world over. Nurses, over time, have used the doctor-nurse game to ensure that it doesn't impact upon patient care, and in the long-term have used professional

education and the development of nursing institutions to act as a conduit for these frustrations to start to effect real change.

CHAPTER 6: CONCLUSIONS

The literature review which was undertaken with this work suggested that there is an existing knowledge gap in Kuwait in relation to postoperative pain assessment in surgical nursing practice. As a result, the focus of the interviews and subsequent analysis was to try to determine how surgical nurses assessed acute postoperative pain in this Kuwaiti surgical ward. The findings of this research identified some interesting discussion points and suggested that there are some issues which need to be addressed concerning postoperative pain diagnosis and care in this particular surgical unit. Of particular concern were the potential knowledge gaps which have been highlighted in terms of the methods of assessing pain – with many nurses indicating that although they were aware of many of the multidimensional factors which should be adopted when assessing pain, other factors were influencing how they viewed pain thresholds and patients' perceptions of pain. This was a critical issue as it appeared often that nurses were imparting their own views as a reference point for how certain patients should feel rather than acknowledging that pain is inherently subjective.

Building on the idea that there may be a gap between the theories of pain assessment and the practices of some nurses in this post-surgical unit, this research also identified that the current support structures for ensuring that nurses are measuring pain adequately and are given the necessary support and autonomy to perform their jobs effectively and consistently may not be sufficient. This is in terms of both the sense of empowerment that nurses have in their current roles and how they are viewed professionally by patients and their fellow colleagues. The conclusions of this work are presented by first outlining the main findings of this work, before exploring the potential recommendations which may help to improve pain assessment methods in this particular Kuwaiti surgical unit.

6.1 Pain Assessment Methods – Knowledge Gaps in Current Practice

Literature surrounding pain assessment has highlighted that some distinct knowledge gaps remain regarding the relationship of social factors and postoperative pain – issues that have been illustrated through the findings of this research between doctors, nurses and the patients themselves. The nurses indicated that they were aware of these multidimensional factors and made reference to them throughout the interviews – detailing how their own methods of pain

assessment included elements of both physiological and psychological checks and inferences based on both verbal and non-verbal communications. They continued to suggest that there may have been slight inconsistencies in how different nurses assessed pain and that they also demonstrated an apparent lack of effective and continued training in delivering consistent pain assessments. Many of the nurses who were interviewed held opinions about how different patients may have higher or lower pain thresholds; however there was little reference as to how this should not be taken into account when delivering pain assessments. Pain, as a subjective notion, will differ from patient to patient – however irrespective of how different people perceive pain, it should always be the patient's own experiences and sensations that orientate how pain is managed.

In addition to the notion of the multi-dimensional elements of pain, the results of the research presented in this thesis also demonstrate an apparent lack of trust between the nurses and patients – a feature which has undermined efforts to establish effective communication strategies, and perhaps even limiting the accuracy of pain assessment methods adopted by the nurses. This suggested that the nurses were aware of the complexities of addressing pain and introducing effective pain management, however little reference was made as to how this could be introduced more formally. Establishing effective nurse-patient relationships is a key feature of successful pain assessments and pain management programmes. The findings of this thesis have suggested that in many instances, at the time of the study in this Kuwaiti surgical unit, this relationship had deteriorated significantly. It appears that nurses lacked some degree of respect from patients in terms of the nurses' ability to diagnose and manage pain properly.

This sense of mistrust may have been brought about by the continued focus on doctors as primary care givers in hospital environments, however there can be little doubt that the nurse-patient relationship has also suffered from the perceptions of various patient groups that nurses hold. Indeed, it is suggested in the findings of this research that some nurses carried with them generalisations about certain races or patient groups (particularly Egyptian patients) which may have affected their pain assessments. Again, this is fundamentally a knowledge gap for nurses who are assessing postoperative pain as nursing practices in any environment should have a particular focus on ensuring that no preconceptions or

generalisations should be brought into consideration when dealing with an individual's feelings of pain.

6.2 Recommendation for Policy Changes

The literature review suggests that there are knowledge gaps on postoperative pain assessment of surgical nursing practice and this is supported in the findings of this thesis. The main concern of these findings is that they suggest that in some instances nurses may not understand or fully consider how a range of different psychological and physiological factors can influence patient pain. This is particularly problematic in postoperative situations where acute pain would be a regular condition amongst patients – all of whom can potentially respond differently to the range of procedures that they will be undergoing. What the research obtained throughout this study established built upon the clinical evidence provided in the literature review. In many instances the literature review may not have been directly applicable to the situations to the Kuwaiti postoperative surgical unit as they do not reference these areas explicitly. As a result of the study reported here, there is now better linkage between the theories and findings of studies in other surgical units to those specifically in Kuwait.

Clearly, policy changes need to be undertaken to ensure that pain assessment in Kuwaiti surgical units are more defined and better implemented, and this is one of the main recommendations from the findings of this research. One of the main areas where pain assessments could be improved is in identifying ways in which pain assessment and pain management in the surgical ward of the Kuwait Hospitals can be improved – addressing how educating nurses about their roles and responsibilities in postoperative pain assessment and management by providing some insights into the theories of pain assessment. This can result in a nursing workforce that feels confident and empowered in making pain diagnosis. It will also outline the postoperative experiences of the patients in the local surgical ward. To improve the nursing practices in Kuwait, it is possible to make use of the information gathered in this study when establishing or redesigning the hospital policies.

Aridhia (2012) suggests that evidence-based care is critical in postoperative pain management and pain assessments, and that this needs to be based on experience, expert opinion and notions of what is best practice. When applied to this research, it is clear that

nurses are building on their own experiences. However, perhaps noted less in the work of Aridhia (2012), and something which has been isolated as a potential issue in this work, is that building on these experiences does not always result in the best nursing practices being applied. The data obtained throughout this study has suggested that on occasions nurses are referring back to their own experiences to make generalised assumptions about patient pain. Where this is the case, it could be argued that rather than leading to more effective pain assessment and pain management programmes, relying too heavily of the nurses' own opinions and experiences without an appropriate training and support programme can actually result in worse pain assessment protocols.

What is perhaps less considered by Aridhia's research is that experience and expert opinions about what best practice is needs to be documented by the nurses themselves so that a formal structure for pain assessment can be established and that this needs to be integrated with patient discussions to ensure that patients are also involved in the decision-making process. This can then ensure that the same checks for pain are carried out in a systematic manner irrespective of the patient's background. Utilising self-assessments from patients themselves (through instruments such as pain scales) can help in this regard. As pain management has been detailed as one of the key performance indicators for healthcare over the coming years in the Middle East (Silbermann et al., 2015), it will be vitally important to the nursing community that more formalised standard operating procedures are put in place. This is in conjunction with the aims of more generalised improvements to health care services in Kuwait such as staff training and personal time (which are again linked to key resource issues, as discussed in Silbermann et al., 2015). At the moment this is restricted by the continued perception that nurses are simply the doctor's handmaiden, rather than providing nurses with a framework through which they can establish more autonomy in relation to pain assessment and pain management.

Surgical nurses have a key role and are accountable for duty of care responsibilities for postoperative patients who are experiencing pain (Buckley, 2000; Ubino, 2003; Mahfudh, 2011). Despite the need to provide pain relief and efficient pain management to postoperative patients, and many patients still experience pain after surgery (Burchiel, 2002). Since the first step to pain management is pain assessment, nurses should master the use of pain assessment tools. Appropriate assessment of pain is essential in the surgical nursing practice. Otherwise,

postoperative patients are at risk of developing complications such as chronic post-surgical pain or even death (Brunner et al., 2009; Carr et al., 2010). It is proposed that pain assessment is difficult and it is affected by a number of variables. For instance, the use of these pain assessment tools is necessary to enable the nurses to gain better understanding about the process of pain assessment. Furthermore, nurses' knowledge on identifying pain cues and competency in pain assessment are equally important. Due to the lack of a formal pain assessment process in the nursing ward studied in Kuwait a robust system based on behavioural pain assessment tools and pain assessment hierarchies would be beneficial. Indeed, if adopted this could also help to establish a comprehensive pain assessment method which covers the differences between different demographic groups and how they experience and report pain.

One option is to establish a pain assessment methodology which is inclusive of range of factors which could potentially influence pain. This includes self-reporting which is inclusive of both verbal and non-verbal methods and where self-reporting is not possible nurses should investigate and record why this was the case. Within the pain assessment methodology nurses should also look for the potential sources of pain – not only in terms of the physical appearance of the areas where surgery has taken place, but also in terms of effects such as changes in behaviour,, the nurses knowledge of previous issues, and the most common causes of pain associated with the patient's condition or procedure. The vital part of this process in accordance with Herr's work is to always assume that pain is present (Herr et al., 2006). This is also linked to another key feature of pain assessment methods – in how patient behaviours are observed. Common behaviours which are found in pain assessment tools may indicate discomfort (Herr et al., 2006). It is important to note, however, that they are not always accurate reflections of pain intensity and in some cases can actually indicate other sources of distress such as psychological distress or emotional issues relating to suffering (as discussed in Pasero and McCaffery, 2005).

Surrogate reporting is another option for pain assessment – where nurses look to gain credible information relating to patient pain or how the patient is feeling from a relative or another person who may know the patient well - for example speaking to a caregiver or clinician. It should be noted however that the judgements of those people will not always reflect the severity of the pain that is being experienced by the patient. A multifaceted approach would,

therefore, be more appropriate inclusive of direct observations, surrogate reporting and an evaluation of response to treatment (Herr et al., 2006). Finally, pain assessment methods can also look to try and establish robust analgesic trials This may be an important tool in postoperative situations in particular because 'An empiric analgesic trial should be initiated if there are pathologic conditions or procedures likely to cause pain or if pain behaviours continue after attention to basic needs and comfort measures' (Herr et al., 2006, p.45).

These pain assessment methods suggest that in all situations an attempt for evaluating pain presence and also the response to treatment should be implemented through a formal standard procedure. Herr et al. (2006) suggest that, in conjunction with the hierarchy of assessment techniques discussed above the following template can be adopted for initial assessment and treatment procedures in pain assessment and pain management (as described in Herr et al., 2006, p.46):

- Attempt to first elicit a self-report from the patient or explain why this cannot be used.
- Identify pathological conditions or procedures that may have caused the patient to experience pain.
- List patient behaviours that may indicate pain – perhaps through the use of established behavioural scales.
- Identify behaviours that caregivers and others with a good knowledge of the patient may have suggested would be good indicators of pain for the patient.
- Attempt an analgesic trial.

Behavioural pain assessment tools can also help to recognise pain in challenging populations. This may be particularly useful in the Kuwait healthcare system where nurses and patients of many different nationalities and cultural backgrounds are interacting on a day-to-day basis. Use of reliable, replicable and valid tools in behaviour pain assessment can help ensure that appropriate criteria are used as pain indicators and that standardisation is promoted – facilitating more effective communication and evaluations across nurses from different backgrounds. It is also important to note that behavioural pain assessment tools cannot be considered as stand-alone assessments but should be part of a wider pain assessment methodology, as any recordings will not be the same as the pain intensity experienced by the patient (as discussed in Herr et al., 2006).

In conjunction with pain assessment it is also important that pain is continually reassessed and documented. This is vitally important in pain assessment and pain treatment methods because patients' behaviours can change over times. Reassessing pain also helps to maintain the most appropriate pain management structure and can improve communication paths between the patient and nurses – over the longer term encouraging more trust from the patients in the nurse's ability to manage patient pain effectively. Miner et al. (2006) showed that there is a negative correlation between how healthcare workers manage pain with patients who they feel are over exaggerating pain. This research along with the data obtained during this research demonstrates that in some circumstances although nurses say they are recording patients comments 'verbatim' this has not been confirmed and there may be some variation in what is being documented by the nurses. This association was prominent in certain ethnic communities and has been isolated in the data presented here as an issue for nurses when caring for Egyptian patients who they believe or anticipate will have lower pain thresholds. These issues need to be discussed, addressed and perhaps monitored by hospital policymakers and the nurses themselves to make sure there is no bias or compromise in the quality of care on offer in Kuwait especially when it comes to pain management. For example, regular audits of notes on accuracy of details could show any discrepancy between notes of different patient groups as well as nursing staff. At a policy level this is the job of internal Quality Assurance staff and these initiatives can be used in healthcare systems across the country and not just surgical wards and in pain management in order to provide a world class service. The Surgical Tool for Auditing Records (STAR) scoring system for auditing surgical notes has been shown to be robust, allows high level of note keeping, provides reproducible data and could be used in Kuwait (Tuffaha et al., 2012).

The research carried out as part of this research also showed that tolerance to pain can be caused by different psychological issues and notions of suffering – supportive of other research such as that of Johnson et al. (2014) who demonstrated that experiences of pain can be related to stress. It is important to consider, therefore, how patients cope with pain and react to painkillers can be based on how they feel in their hospital environment following surgery. Clearly, if stress is a factor in pain tolerance, stressing patients by not responding to bell calls in appropriate time, not being able to prescribe medication, not being able to see a doctor when required would add to the intolerance and might affect the patients' experiences of pain or suffering. These are issues that can be looked into at policy level to alleviate

suffering of patients, help nurses manage their workload, and reduce costs to healthcare service.

The research undertaken here shows that nurses were already helping patients tolerate pain through allowing patients to sleep as a good night's sleep has been shown to be a predictor of how well a patient tolerates pain (Zarrabian et al., 2014). Connecting the theme of better communication to this and having nurses explain sensitively the need to tolerate a little pain and how that would benefit patients may also help in the multimodal management of pain. Nurses need to be enablers of informed choice in patients, and this is achieved by improving communication, increasing nurse autonomy, and looking at protocols for pain assessment against a range of pain management options. This route may further gain patient's respect for the nurses as they will be seen to be actively helping to treat patients rather than waiting for advice from doctors. This is an issue of autonomy for nurses, which needs to be formally addressed at regional level through formal policy structures relating to pain assessment and management in Kuwaiti hospitals.

A recent study carried out in the US over 8 years with a large number of patients on the cost of pain medication shows a staggering $17.8 billion dollars is spent annually of which 11% is on analgesic/NSAID (Rasu et al., 2014). Although Kuwait has a smaller population, NSAIDs are ranked top for cost and volume (Murphy et al. 2009) therefore if trends are similar, a reduction in the cost of unnecessary pain killers would be significant and savings could be invested in one of the many areas of need in pain management as highlighted by this research. In areas such as Kuwait this shows that nurses can be viewed as agents of economic good where there are afforded more autonomy in decision-making, and given more education and encouraged to apply more non-pharmacological methods of pain management. Nurses are aware that their assessments can alter the treatment a patient can receive therefore making staff aware of such facts and figure would be beneficial for the Kuwaiti healthcare system. Low cost training programmes to educate nurses using pocket cards in order to reduce unnecessary prescription of painkillers has been shown to be effective (Rosenbluth et al., 2011) and theoretically can work in this situation. To deal with over exaggeration of pain by patients and the impact of this on over-prescribing analgesics, as research suggest the pain would need to be managed in a multimodal manner, using psychosocial methods as well as

pharmacological methods as previously discussed (Auret and Schug, 2013; Salama-Hanna and Chen, 2013).

The range of problems which have been described in relation to current nursing practices are not issues which cannot be resolved given existing support mechanisms. The main issue is that there needs to be a systemic and comprehensive review of current nursing practices – focusing on more autonomy and more emphasis on empowering nurses in decision-making for pain assessments and pain management practices. In addition, this focus needs to be addressed through a combination of both bottom-up and top-down approaches. Nurses themselves need to ensure that they are focusing on continual training programmes and promoting more awareness and communication between nursing staff. To support this, however, there is also a need to ensure that any problems which have been identified in nursing practices are addressed at the highest level of the Kuwaiti healthcare system.

In Kuwait, the Ministry of Health needs to take a more active role in promoting better nursing training. The Ministry of Health in Kuwait comprises of many departments and there are various ministers which influence a variety of healthcare departments including the Vice Minister, Dentistry Vice Minister, Allied Health Vice Minister, and Administrative Affairs Minister. Despite the large remit of the Ministry of Health, nursing has no vice minister although it continues to retain the majority of the Ministry's population. It is clear, therefore, that an immediate requirement is to try to appoint a qualified vice minister who can influence and play a major role in dealing with many of the problems that the nurses in Kuwait are raising. At the moment, it seems that there is almost an atmosphere of resignation amongst the nursing profession that the wards will continue to be understaffed and that there will be no real changes made in ensuring that nurses are more empowered and better trained to deliver pain assessments and implement pain management programmes.

A vice minister in charge specifically of nursing provides a route through which the nursing profession can finally reach key decision-makers in Kuwait. By ensuring that a qualified and knowledgeable professional is in place to represent and manage the nursing profession, there is at the very least continual assessments of nursing issues including staff shortages, the recruitment of qualified and competent nurses, and establishing better and more robust standards for nurses at entry level recruitment such as minimum entry level requirements.

The vice minister can also help in developing more widespread and re-focused training programmes which seek to empower nursing roles and responsibilities – with the ultimate goal of improving nurse morale and image. It should be considered, however, that the vice minister would only be providing a framework through which these programmes can be implemented. To be successful over the longer term, there is a need for nurse buy-in to ensure that effective bottom-up strategies are met.

6.2 Recommendation for Changes to Nursing Practices

In addition to structural and policy changes which need to be adopted, it is also evident from the data obtained in this thesis that there needs to be changes in standard nursing practices to ensure that pain assessment methods are improved in post-surgical situations. This is essentially because to be successful over the longer term there is a need to change the culture of nursing practices in Kuwait to encourage more empowerment and a sense of autonomy for the nursing community. From the data obtained, there are several options which may help to improve nursing practices over the short and longer term. This includes process changes such as the introduction of regular nursing rounds, allowing nurses to have more involvement in pain prescription, and introducing more effective training programmes and cross-training for nurses in the surgical unit. In isolation, these changes may seem relatively small - however when considered as a whole, these may help to improve pain assessment and pain management for the entire nursing process.

One potential issue which was identified in the data obtained was that there appeared to be some inconsistency with nursing rounds. Studies have shown that implementing regular nursing rounds (e.g. every hour) as well as patient visits by other health care workers can have a positive impact on patient satisfaction (Mitchell et al., 2014; Meier, 2014; Negarandeh et al., 2014). As a result, introducing regular nursing rounds may improve patient-nurse interactions and promote the quality of nursing care and patient satisfaction by facilitating a greater focus on patient-nurse communication in Kuwaiti hospitals (Mitchell et al., 2014; Meier, 2014; Negarandeh et al., 2014). This is important to be undertaken congruent with more focus on nurse autonomy in decision-making to ensure that it does not become simply a target or tick box approach to nursing practice. Whilst this may seem like a time consuming process with nurses already complaining of being over-worked, a team effort to do patient rounds may reduce bell calls, complaints, and anxiety. This may also help to reduce suffering

in patients and increase pain tolerance causing a feedback loop to reduce workload on nurses in the long run. For this approach to be effective, the time between training period and qualification to prescribing needs to be short enough not to compromise on quality of training but also allow staff can get back to full ward duties quickly (Ziegler et al., 2015).

During this study nurses felt prescribing powers could help to deliver better care to patients (Scrafton et al., 2012) providing another reason why nurses should be given more autonomy. Alhasem et al's research looked at primary healthcare facilities in Kuwait and found during a survey of 426 people that the vast majority (87 percent) felt that they time for communication between the physician and the patient was not enough (Alhasem et al., 2011). Clearly communication is an issue throughout the Kuwaiti healthcare system and giving nurses more autonomy and facilitating a system where nurses take more time in pain assessments to communicate with patients could help to start to erode these issues with patient-physician and patient-nurse relationships. Furthermore positive conversations like 'I can clearly see you are in pain therefore I will recommend stronger medication for you as it is in your best interest' may be helpful in assuring patients in Kuwait that nurses can take active decisions that benefit them rather than being passive carers.

Improved communication which better considers the psychological influences of how nurses communicate and how they can encourage more open and honest dialogue between patients and nurses can help to reassure the patients that the nurses are working with them and understand their needs. As patients spend most of their time in close contact with nurses knowing how to deal with patients and their complaints related to pain whether pharmacologically or psychologically would help foster better relationship between nurses and patients and provide better care in line with international standards (Ubino, 2003; Mahfudh, 2011; European Society of Regional Anaesthesia and Pain Therapy, 2011). This would also serve to fulfil findings that a nurse's role should put the patients first (White et al., 2010) and also create more effective pain assessment and appropriate pain management by allowing nurses and patients to discuss a variety of treatment options. These approaches would further fulfil findings and recommendation from research that a nurse should be taking a proactive role in assessing postoperative pain (DiCenso, Gordon and Ciliska, 2005).

Another key area which was identified in the data obtained through the nurse and patient interviews was that there needs to be a more robust emphasis on multidisciplinary approaches to pain assessment. As a concept pain is subjective and will always be a challenge to assess the postoperative patients' pain. Since not all nurses are assessing pain when they should, hospitals in Kuwait should take a multidisciplinary approach to pain assessment and management rather than the traditional belief that it is the responsibility of nurses. Incorporating the ideas of Lewandowski et al. (2005), and Melzack and Torgerson (1971) pain has to be considered as a subjective concept meaning that the tools to effectively assess and manage pain need to be inclusive of approaches which consider how people try and communicate their pain. Indeed there is a need to try and challenge the assumptions that nurses are making in Kuwait to deliver more effective pain management. This involves more consideration for the theories behind pain assessment such as the Gate Control Theory (discussed in Melzack and Wall, 1965), and also in unconditional positive regard in patient care. This can be helped through empowerment and in improving the doctor-nurse relationship. Being made aware of such barriers, decision-making in pain assessment and management should not be considered as the nurses' sole obligation. Instead, other members of the healthcare team should be encouraged to participate in the care and treatment of postoperative patients. It is proposed in this research that nurses need to be given more autonomy in pain assessment and pain management and that a redistribution of the division of labour in many Kuwaiti postoperative care situations needs to be assessed. More autonomy can be achieved by establishing more effective and inclusive nurse representative organisations who focus on giving nurses more promotional routes, and more ongoing training and education options. In addition the doctor-patient relationship needs to become far more communicative – looking in more detail at ensuring doctors treat nurse information as a critical part of their own assessments and decision-making processes.

The data obtained during this study supports the research of Satija et al. (2014) in that people from different backgrounds will have different opinions on pain and will require different pain assessment and different pain management programmes – with the research of Satija et al. (2014) showing that even in the younger patient population, there is still a need to address issues in effective pain management. Pain management in younger population is significantly aided by the presence of a multi-disciplinary team with effective communication skills (Satija et al., 2014), and the use of a multi-disciplinary team and effective communication skills

should not be limited to just one patient group, but should be available to all patients for the successful management of pain. This would be an important consideration for effective nurse training. This can be assessed through individual needs rather than clustering patients into groups and assuming one rule fits all in the group. Research by Auret and Schug (2013) and Salama-Hanna and Chen (2013) suggests the use of multimodal preventive and treatment techniques (e.g. combination of psychosocial, pharmacological and non-pharmacological management) to reduce chronic postoperative pain and dependency on analgesics, with local variations where necessary (Auret and Schug, 2013; Salama-Hanna and Chen, 2013).

6.3 Recommendation for Further Study

In addition to policy changes and recommendations, the data obtained in this study has also identified potential avenues for future studies. This research identified that there are some procedural issues in the Kuwaiti nursing system in relation to pain assessment and pain management, often caused by issues of autonomy and empowerment amongst the nurses questioned. This research focused on gathering data relating to nurses and patients thoughts, feelings and behaviours in relation to postoperative care specifically through in-depth face-to-face interviews. The theoretical basis for this work was focused on postoperative environments and pain assessment and pain management rather than focusing on the wider issues of postoperative care. As a result the evidence here has also identified some areas for further study which may be of benefit.

The main research undertaken in this thesis looks at the central factors that could explain the multidimensional experiences of pain in postoperative environments – however the main focus of the work was to look at acute pain specifically. It is considered in relation to the implications for future research that there will also be a strong rationale for looking at issues relating to chronic post-surgical pain, and conducting research with patients who have been discharged and are outside of the hospital environment, but may still be experiencing pain. It has been evidenced in other research that chronic post-surgical pain can debilitate the patients for life after surgery, and even death (Wood, 2010; Marmo and Fowler, 2010). It may be interesting, therefore, to explore how pain is assessed and managed in relation to these patients, and whether there are any similar results or concerns which are highlighted within this research of acute pain in postoperative pain assessment.

In addition it was noted that the research highlighted issues in pain assessments for younger and older patients. In this study nurses considered that elderly patients appear to be less tolerant of pain. As a result it may be worth exploring the opportunity to adopt different pain management techniques for different demographic groups. For example, it may be interesting to explore whether older patients need to have different pain assessments and pain management programmes than younger patients or whether there is a requirement to make more frequent visits to some patient groups to check the status of the pain. In addition, the cultural issues identified in this work in relation to the Egyptian patients specifically suggest that further examinations of cultural issues in Kuwait need to be explored across a variety of medical professions. Since no local studies based in Kuwait were found to exist, studies included in the literature review were international studies - in particular examples of nurse disempowerment and de-motivation in Saudi Arabia.

There needs to be more recognition of the catastrophising of pain in some demographic groups and how this does not limit people's experiences of pain – but instead highlights how different cultural groups may have different experiences of perhaps even the same type of pain. Indeed, it is important to determine that these psychological issues or the notion of suffering should not diminish how pain is managed. In addition it is recognised that the nurses felt that there were real issues in terms of powerlessness and autonomy against their ability to effect change within the healthcare system and encourage greater support and time for effective pain assessment. More research would be required to determine how the power struggle can be eliminated from pain assessments in postoperative scenarios and how this can be achieved given the current constraints of the nursing system.

One of the key elements of this research, however, was that there are clear issues in relation to the concept of disempowerment and a lack of autonomy for nurses in pain assessment and pain management in these environments. This, along with evidence for the persistence of the doctor-nurse game (as discussed in Stein, 1967, 19) in the Kuwaiti hospital ward that was researcher indicates that there needs to be a far greater focus on addressing the issue of nurse autonomy across the Kuwaiti healthcare system as a whole. There clearly is a rationale for research which looks at nursing support and education structures, as well as a detailed investigation of current nurse turnover levels, an assessment of the amount of migrant nurses which are relied upon in the Kuwaiti healthcare system and how this is impacting nursing

performance and establishing effective nursing protocols (in terms of trying to consolidate the nursing education levels and practice experience of nurses from many different countries). There is also a clear rationale for undertaking research which can help to establish, on a wider-scale, a mechanism for nurses to achieve more autonomy and decision-making powers in relation to pain assessment and pain management in Kuwaiti postoperative environments – and perhaps even see how this relates to pain management in many other non-surgical situations.

This research has provided evidence to suggest that notions of disempowerment and the continued problems in communication between doctors, nurses and patients are now impacting patient care in a negative way in postoperative situations in Kuwait. The nurses themselves continue to be concerned that their own pain assessment methods are limited by workload and their own lack of autonomy in making decisions relating to pain management. What was less evident in the nurse's responses was how they change this – how they themselves can make a change which will benefit the nursing community and also the patients that they are serving. There does, in many instances, seem to be a real lack of focus as to how these issues are impacting the nurses, and continuing to erode the trust relationship between nurses and patients. Irrespective of the conditions in which the nurses find themselves, for nurses the patients need to come first and real change needs to consider how changes such as an increased focus on education levels and empowerment, will be for the benefit of both nurses and patients – rather than simply focusing on what needs to be done to improve the situation for nurses alone.

6.4 Summary

The key categories which have been illustrated in this work are that nurses feel disempowered and disrespected and this is a key feature in determining how current support networks throughout the Kuwaiti healthcare system may not be sufficient in ensuring that nurses are delivering robust and consistent pain assessments. Nurses also alluded to being overworked and indicated that this was preventing them from engaging with patients. In many instances this notion of disempowerment are manifesting in nurses making assumptions about pain – with some nurses even suggesting that certain cultural groups suffered pain intolerance or those individuals in pain would just be looking for attention. Where nurses feel more empowered through greater autonomy these feelings may begin to change. Increasing

the profile of the nursing profession helps staff retention and will empower nurses to make the changes they need. This cannot be the result of workload alone, but needs to be addressed in terms of the role nurses have and the emphasis that nurse training in Kuwait puts on the theories of pain assessment and how pain is a subjective experience. As a result a series of recommendations are made to try and help nurses in Kuwait establish a more robust system of pain management and pain assessment in postoperative patients.

The main findings of this research suggest that all of the current nursing problems in Kuwait are avoidable. Indeed, in most situations the solutions to these problems are not difficult to resolve given the proper frameworks and support structures achieved through both top-down and bottom-up management and process changes.

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